A SAFETY ASSESSMENT OF INGREDIENTS ADDED TO TOBACCO IN THE MANUFACTURE OF CIGARETTES

by

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I. INTRODUCTION

Flavoring ingredients have traditionally been added to tobacco, and tobacco used in cigarettes commercially manufactured in the United States has always contained such ingredients. Non-tobacco ingredients consist of 3 general types:

Processing aids are used to adjust products to meet consumer demands, such as lower yields of "tar" or nicotine, and to facilitate the manufacturing process. Most processing aids are recovered during manufacturing, although minute residues of a few parts per million (ppm) range may remain in the tobacco. An example of a processing aid commonly used in cigarette manufacturing is carbon dioxide.

Casing Materials and Humectants are added to replace sugars lost during curing of the tobacco, to retain moisture, as a carrier for flavor, and to make the smoke smoother and milder. All casings and humectants used by United States cigarette manufacturers are foods, food products, or ingredients approved for use in food by the Food and Drug Administration (FDA). An example of a widely used casing material is sugar, and an example of a humectant used in cigarette tobaccos is propylene glycol.

Flavorings are added to tobacco to impart distinctive flavors, and to fortify natural flavors lost during curing and processing of tobacco. They consist of natural herbs and

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spices, or their essential oils, as well as synthetic flavors. Most flavorings occur at very low levels (i.e. < 1 ppm), usually as part of specific proprietary formulations. An example of flavorings commonly added to cigarette tobacco is vanillin.

II. THE EVALUATION OF INGREDIENTS ADDED TO CIGARETTE TOBACCO

The authors of this report, whose qualifications are summarized in the appendix, each independently reviewed the scientific data on ingredients added to cigarette tobacco, and this report represents their consensus on the safety of the ingredients.

The material examined was extensive, and included the confidential list of the ingredients added to tobacco in the manufacture of cigarettes. The authors were also provided with summary data of all relevant published and unpublished toxicity tests and reports, as well as the original publications of data when requested. Pyrolysis and transfer rate data, maximum use levels, and annual poundage data for the ingredients were also evaluated. Each scientist independently visited the individual tobacco companies to examine the testing and research programs used for the ingredients. Reports and raw data from the studies were made available and were examined as necessary, and each scientist formed an independent opinion regarding the adequacy of the testing and safety of each ingredient.

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III. TOXICITY DATA ON INGREDIENTS ADDED TO CIGARETTE TOBACCO

Approximately 94% of all ingredients added to cigarette tobacco in the United States are approved as food additives by the FDA, or have been given the status "Generally Recognized As Safe" (GRAS) by the FDA or other expert committees. Some ingredients are highly volatile and are, thus, lost during the manufacturing process rather than being present in the finished cigarette. Moreover, many of the ingredients are identical or essentially similar in composition to natural leaf tobacco components. The pyrolysis products of such ingredients are not expected to depart significantly from the amounts or types of components generated from a range of additive-free tobaccos or tobacco blends. Furthermore, the ingredients do not contribute measurably to tar yields.

The 28 non-tobacco ingredients that are present at the highest levels in cigarettes occur at levels ranging from 0.05% to 11.58% by weight, the latter being sugars. These ingredients, along with the processing aids, also account for more than 99% of the total weight of the ingredients added to cigarette tobacco. All of the remaining non-tobacco ingredients that are present in cigarettes occur at levels below 500 ppm (0.05%), and over one-third occur at levels below 1 ppm (0.0001%).

The authors reviewed extensive data on the ingredients added to cigarette tobacco from large numbers of published and unpublished studies. Included among these data were findings

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from in vitro and in vivo tests on metabolism, genotoxicity and reproduction, as well as acute, subchronic, and chronic toxicity tests. These studies are of the same type as those used to assess the biological effects of food additives, drugs and environmental chemicals. The objectives of these studies are to determine the exposure levels at which adverse effects may occur and the nature of the adverse effects.

Metabolism studies specifically examine the manner in which a substance is absorbed in the body, broken down, and eliminated. These processes can all be influenced by the doses administered, and they also may vary among species. Such information is, therefore, often essential for determining the relevance of high dose effects in animals to the relatively low levels of human exposure.

Genotoxicity studies assess the capacity of a chemical to alter the genetic material in cells. Tests are conducted to detect the potential for inducing either gene mutations, chromosome damage, or DNA damage. Substances which experts recognize as clearly positive in such tests may be harmful, particularly with regard to potential risks of cancer or birth defects.

Acute, subchronic and chronic toxicity studies involve the administration of test substances to animals by routes similar or analogous to those known for humans, at various doses, and for time periods ranging from very brief to lifetime

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exposures. Animal studies with the ingredients added to cigarette tobacco have included skin painting, inhalation, and oral routes of exposure. The objectives of such studies are to identify the type(s) of toxicity and the organs affected at high test doses, to determine levels of exposure that will pose no unacceptable risks to humans and, in the case of skin painting, to determine tumor promotion effects. These studies require thorough clinical and pathologic evaluations of many test animals during and following the exposures, plus a final interpretation of the relevance of the findings to human risk.

Reproductive studies are specialized types of sub-chronic and chronic toxicity experiments which specifically examine the effects of a test substance on fertility, gestation, and fetal and neonatal development.

In reviewing the data related to the safety of ingredients added to cigarette tobacco, emphasis was given to the major ingredients (those comprising 99% of the ingredients added), since exposure to these would be expected to be highest. Most ingredients are present at very low levels as components of proprietary flavor formulations, and exposure, if any, would be toxicologically insignificant. Exposure to many of these flavor ingredients is, in fact, greater through the diet than it is through cigarette smoking.

Although all types of toxicological data have some utility for evaluating the safety of ingredients added to

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cigarette tobacco, particularly relevant are inhalation studies involving actual smoking experiments in animals which compare the biological effects of inhaling tobacco smoke with and without added ingredients. In such experiments, animals inhale smoke from burning cigarettes for extended periods, and toxicological effects are assessed by thorough clinical and pathologic examinations. Although all body systems are examined, emphasis is given to the upper and lower respiratory tracts and the cardiovascular system. Ingredients added to cigarette tobacco have not been observed to induce adverse effects in these experiments. In fact, in many cases added ingredients have reduced the levels of irritation from tobacco smoke.

The authors also reviewed the available data on pyrolysis of the ingredients added to cigarette tobacco. Based upon such data from representative ingredients, it has been determined that most volatile ingredients do not pyrolyze in burning cigarettes, i.e., they do not decompose or chemically change as a result of heat. They are transferred intact in smoke. Thus, if there is exposure and absorption, metabolism would be similar to ingestion. Among those that do pyrolyze, their chemical similarities to tobacco leaf components, and their relatively low levels, suggest that they do not significantly alter the composition of tobacco smoke. In any event, toxicity from pyrolysis products would be evident in smoking

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studies and, as indicated above, such studies have been negative.

Based upon analyses of all of the toxicological data reviewed by the authors of this report, it was concluded that there was no evidence that any ingredient added to cigarette tobacco produces harmful effects under the conditions of use in cigarettes.

IV. SUMMARY AND CONCLUSION

Ingredients are added to tobacco to aid in processing, retain moisture, add flavor, and reduce "tar" and nicotine yield. They have always been used in commercially manufactured cigarettes in the United States. Most are present at extremely low levels, and, as most ingredients are essentially similar to natural tobacco components, the pyrolysis of these ingredients is not expected to depart significantly from the pyrolysis of additive-free tobacco.

It is important to recognize that the use of these ingredients has enabled manufacturers to develop cigarettes with lower "tar" and nicotine yields than would otherwise be available, and the primary issue in safety assessment is whether or not cigarettes are potentially hazardous as a result of the added ingredients. A careful analysis of the scientific data clearly indicates that this is not the case.

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The 28 non-tobacco ingredients that are present at the highest levels in cigarettes occur at levels ranging from 0.05% to 11.58% by weight. These ingredients, along with processing aids, comprise 99% of the total poundage of ingredients added to tobacco in the manufacture of cigarettes, and have been extensively tested for safety. All remaining ingredients occur at lower levels, with many below 0.0001% (1 ppm). Approximately 94% of all ingredients are approved as food additives, or are generally recognized as safe (GRAS) by expert committees, and exposure to these ingredients is generally higher in food than through smoking.

The authors of this report independently examined extensive published and unpublished toxicologic, metabolic, and pyrolysis data on the ingredients added to cigarette tobacco, and found none to be potentially toxic at levels of use.

It is concluded that the ingredients added to tobacco in the manufacture of cigarettes by United States manufacturers are not hazardous under the conditions of use.

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APPENDIX

Curricula Vitae of Authors

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PROFESSIONAL EXPERIENCE:

University of Chicago Medical School

Research Assistant, Univ. of Chicago Toxicity Laboratory, 1946-1950
Research Associate, US Air Force Radiation Laboratory and Univ. of Chicago Toxicity Laboratory, 1951-1953
Assistant Director, US Air Force Radiation Laboratory & Toxicity Laboratory, 1954-1967
Assistant Professor, Department of Pharmacology, 1956-1957
Associate Professor, Department of Pharmacology, 1957-1967

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Professor of Pharmacology and Toxicology, Department of Pharmacology, Toxicology and Therapeutics, 1967-
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EDITORIAL BOARDS:

Toxicology and Applied Pharmacology, 1970-1982
Forum for the Advancement of Toxicology, 1973-1983
AACTION (American Academy of Clinical Toxicology), 1974-1977
Environmental Health Sciences, 1976-
Archives Internationales de Pharmacodynamie et de Therapie, 1976-
Journal of Environmental Pathology and Toxicology, 1977-
Health & Environment Digest, 1987-

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CONSULTANTSHIPS

ChemAgro Corp., Kansas City, MO, 1950-1980
Walter Reed Army Institute for Research, 1960-1963
    Radiation Protection Panel, 1962-1963
    Atomic Defense Support Agency, Group N-3, 1961-1962
White House Evaluation Study (Woolridge Report), 1962-1963
NIH Special Grants Program Advisory Panel, 1962
NIH Toxicology Study Section, 1965-1970
HEW Secretary's Commission on Pesticides (Mrak Report), 1968-1969
    Subcommittee on Interactions, 1968-1969
Midwest Research Institute, 1969-
Institute for Clinical Toxicology, Houston, Texas, 1969-1973
National Academy of Sciences, National Research Council, 1970-
    Toxicology Information Program (Chairman), 1970-1975
    Food Protection Committee, 1974-1979
    Committee on Non-nutritive Sweeteners, 1974-1975
    Safe Drinking Water Committee, 1975-1978 (Chairman, 1976-1978)
        Pesticides Subcommittee (Chairman), 1975-1977
    Committee to Revise Publication 1138, 1976-1977
        Chronic Toxicity Subcommittee (Chairman), 1976-1977
    Board on Toxicology and Environmental Health Hazards, 1978-1986
    Board on Environmental Sciences and Toxicology, 1986-
    IOM Food Safety Policy Subcommittee, 1978-1979
        Committee to study Saccharin and Food Safety Policy, 1978-1979
    IOM Advisory Committee on CDC Study of Vietnam Veteran Health, 1985-1988
    Committee on Toxicity Testing Strategies (Chairman), 1982-1984
    Committee on Mixtures (Chairman), 1986-1988
    Committee on Toxicology (Chairman), 1987-
Environmental Protection Agency, Washington, D.C., 1976-
    FIFRA Science Advisory Panel, 1976-1980
        Worker Re-entry Protocol Group, 1977-1978
        Committee on Tolerances, 1978-1979
    Science Advisory Board, Environmental Health Committee, 1980-
        Organics Subcommittee (Chairman), 1986-
        Estimating Risks from Dioxins/Dibenzofurans, 1986-1987
        Severity of Effects Ranking Schemes, 1985-1986
        Acute Toxics Committee, 1986-1987
        Hazard Ranking System Committee, 1987-1988
National Institute of Environmental Health Sciences, 1975-1978
    NIEHS Advisory Council, 1975-1978
    University-Based Centers Subcommittee (Chairman), 1975-1978
    Second Task Force on Human Health and the Environment, 1976-1977
    Biologic Mechanisms and Toxicity Subcommittee, 1976-1977
F.E.M.A., Washington, D.C., Expert Panel Member, 1977-
National Advisory Committee, California Primate Center, Davis, 1977-1980
CPC International, Englewood Cliffs, Toxicology Assessment Group, 1978
Best foods, Union, NJ, Food Safety and Nutrition Board, 1978-
OTA, Washington, Panel on Assessment of Environmental Contaminants, 1978
Rohm and Haas, Philadelphia (Medical Dept.), 1980-
Stauffer Chemical Corp., Pesticide Advisory Group, 1980-1984
National Toxicology Program, Board of Scientific Counselors
    Ad Hoc Panel on Chemical Carcinogenesis Testing & Evaluation, 1982-1984

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DHHS Advisory Committee on Long-term Health Effects of Phenoxy Herbicides and Contaminants, 1982-1985
National Sanitation Foundation, Ann Arbor, 1983-
Council of Public Health Consultants, 1983-
Health Advisory Board, 1983-
Drinking Water Additives Peer Review Group, 1987-
Nutrition Foundation, Washington
Predictive Role of Mouse Liver Tumors Committee, 1982-1983
WAREP, Panel on Health Aspects of Waste Chemical Disposal, 1983-1984
Kansas Dept. Health and Environment, Topeka, 1983-
Toxicology Advisory Committee, 1983-
Governors Advisory Committee on Radon (Chairman), 1987-
National Institute of Occupational Safety and Health, 1984-1987
Board of Scientific Counselors, 1984-1987
Pillsbury Corp., Minneapolis, 1984-
White House Advisory Panel on Ranchhand Veterans, 1984-1986
Clean Sites Inc., Alexandria, Technical Advisory Panel, 1984-
Naylor Dana Institute, Advisory Panel on Acetaminophen, 1986-1987
Black and Veatch Engineering Corp., Kansas City, 1986-1987
Denver Water Department Reuse Demo. Project Advisory Committee, 1986-
Scientific Advisory Panel on Ground Water Recharge (California), 1987
Water Resource Recovery Pilot Plant Project (Tampa, FL), 1987-
Health Effects Group (Chairman), 1987-
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International Life Sciences Institute, Risk Science Institute, 1988-

LOCAL COMMITTEES:

Poison Control Center Committee (Chairman), 1968-1980
Pharmacy and Therapy Committee (Chairman), 1969-1984
Basic Science Lectureship Committee, 1970-1972
Health Care Delivery systems Committee, 1971-1972
Research Committee, 1971-1973
Animal Care Committee, 1972-1974
Computer Committee (Chairman), 1972-1974
Search Committee for Chair of Biochemistry, 1975
Search Committee for Dean of School of Nursing (Chairman), 1975
Education Committee, 1976-1977
Faculty Promotion and Tenure Committee, 1976-1977
Curriculum Implementation Committee, 1976
Ad Hoc Ethics Committee, 1976
Long Range Planning Committee, 1976
Information Systems Advisory Committee, 1977
Medical Center Safety Committee (Chairman), 1978-1983
Radiation Safety Committee, 1978-1983
Biohazards Committee, 1978-1983
Engineering Safety Committee, 1978-1983
Committee for Intercampus Liaison (Chairman), 1978-1980
Search Committee for Director of Biomedical Engineering (Chairman), 1980
Search Committee for Graduate School Dean (Chairman), 1980
Task Force on Need for School of Public Health, 1980
Education and Curriculum Committee, 1984-1987
Center for Environmental and Occupational Health, 1986-
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Essays in Toxicology (F. Blood, ed.), Academic Press, New York, Effect of Physical Environmental Factors on Drug Response, 1972.

Casarett and Doull's Toxicology: The Basic Science of Poisons, Macmillan Publishing Co., Inc., New York.

First Edition (L. J. Casarett and J. Doull, eds.), 1975
Second Edition (C. D. Klaassen, M. O. Amdur and J. Doull, eds.), 1980
Third Edition (C. D. Klaassen, M. O. Amdur and J. Doull, eds.), 1986

Insecticide Biochemistry and Physiology (C. Wilkinson, ed.), Plenum Press, NY, The Treatment of Insecticide Poisoning, 1976.

Information Technology in Health Science Education (E. DeLand, ed.), Plenum Pub. Co., Use of CATS in Pharmacology, 1978.

Food Safety (H. Roberts, ed.), Wiley & Sons, New York, Chapter 7, Food Safety and Toxicology, 1981.

Complex Mixtures, National Academy Press, Washington, D.C., 1988.

2021522307

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BIBLIOGRAPHY

1. Dubois, K. P., Doull, J., Salerno, P. R., and Coon, J. M. Studies on the toxicity and mechanism of action of p-nitrophenyl diethyl thionophosphate (Parathion). *J. Pharmacol. Exp. Ther.* 95: 79 (1949).

2. DuBois, K. P., Doull, J., and Cochran, K. W. Effects of acute beryllium poisoning on carbohydrate metabolism. *Proc. 116th Meeting Amer. Chem. Soc.*, p. 57 (1949).

3. DuBois, K. P., Doull, J., and Coon, J. M. The cholinergic action of alkyl pyrophosphoramide. *J. Pharmacol. Exp. Ther.* 98: 6 (1950).

4. Cochran, K. W., Doull, J., Mazur, M., and DuBois, K. P. Acute toxicity of zirconium, columbium, strontium, lanthanum, cesium, tantalum and yttrium. *J. Ind. Hyg. Occup. Med.* 1: 637 (1950).

5. DuBois, K. P., Doull, J., and Coon, J. M. Studies on the toxicity and pharmacological actions of octamethyl pyrophosphoramide (OMPA, Pestox III). *J. Pharmacol. Exp. Ther.* 99: 376 (1950).

6. DuBois, K. P., Cochran, K. W., and Doull, J. Inhibition of citric acid synthesis *in vitro* by x-irradiation. *Proc. Soc. Exp. Biol. Med.* 76: 422 (1951).

7. Doull, J., DuBois, K. P., and Geiling, E. M. K. The biosynthesis of radioactive bufagin. *Arch. Int. Pharmacodyn.* 86: 454 (1951).

8. Doull, J., Hermann, R. G., Geiling, E. M. K., and DuBois, K. P. Effects of bufagin on the respiration of cardiac muscle and other tissues. *Arch. Int. Pharmacodyn.* 86: 487 (1951).

9. Doull, J., and DuBois, K. P. Toxicity and anticholinesterase action of tetra-n-propyl dithionopyrophosphate. *J. Pharmacol. Exp. Ther.* 106: 382 (1952).

10. DuBois, K. P., Doull, J., Deroin, J., and Cummings, O. K. Studies on the toxicity and mechanism of action of some new insecticidal thionophosphates. *Arch. Ind. Hyg. Occup. Med.* 8: 350 (1953).

11. DuBois, K. P., Doull, J., Okinaka, A. J., and Coon, J. M. Studies on the toxicity and pharmacological actions of symmetrical and unsymmetrical diethyl bis(dimethylamido) pyrophosphate. *J. Pharmacol. Exp. Ther.* 107: 464 (1953).

12. Doull, J., and DuBois, K. P. Influence of hibernation on survival time and weight loss of x-irradiated ground squirrels. *Proc. Soc. Exp. Biol. Med.* 84: 367 (1953).

13. Doull, J. Studies on the cholinesterase activity of tissues of irradiated animals. *J. Pharmacol. Exp. Ther.* 110: 14 (1954).

14. Okinaka, A. J., Doull, J., Coon, J. M., and DuBois, K. P. Studies on the toxicity and pharmacological actions of bis(dimethylamido) fluorophosphate (BFP). *J. Pharmacol. Exp. Ther.* 112: 231 (1954).

2021522308

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15. Fitch, F. W., Doull, J., and Wissler, R. W. Histopathology of the irradiated hibernating ground squirrel (*Citellus tridecemlineatus*). *A.M.A. Arch. Path.* 60: 644 (1955).

16. Hallesy, D. W., and Doull, J. Acute and chronic toxicity of orange B and orange 1 in rats. *J. Pharmacol. Exp. Ther.* 116: 26 (1956).

17. Doull, J. Irradiation and survival in hibernating animals. *Med. Sci.* 1: 27 (1956).

18. Landahl, H. D., Hasegawa, A. T., and Doull, J. Effect of whole body x-irradiation on the heat production and temperature regulation of rats and mice. *Radiat. Res.* 5: 488 (1956).

19. Doull, J., Plzak, V., and Noble, J. F. Synthesis and radioprotective properties of chlorinated O-dialkylaminopropionamideo- and O-dialkyl-aminopropylaminodiphenyl sulfide derivatives. *J. Med. Pharm. Chem.* 1: 171 (1959).

20. Doull, J., Plzak, V., and Brois, S. J. Protective effects of various phenone derivatives against radiation lethality in x-irradiated mice. *Radiat. Res.* 11: 439 (1959).

21. Noble, J. F., Hasegawa, A. T., Landahl, H. D., and Doull, J. Effect of fractionation on survival of mice following chronic exposure to x-irradiation. *Radiat. Res.* 11: 457 (1959).

22. Doull, J. Chemical antidotes for radiation injury. *Arch. Environ. Health* 2: 284 (1961).

23. Vesselinovitch, D., DuBois, K. P., Fitch, F. W., and Doull, J. Mammalian toxicity and histopathologic effects of 2,6-dibutyl-4-nitrophenol. *Toxicol. Appl. Pharmacol.* 3: 713 (1961).

24. Doull, J., Plzak, V., and Root, M. Protection against chronic radiation lethality in mice. *Radiat. Res.* 16: 578 (1962).

25. Doull, J., Plzak, V., and Brois, S. J. A survey of compounds for radiation protection. *USAF School of Aerospace Med. Report*, No. 62-29: 1 (1962).

26. Doull, J., Plzak, V., and Root, M. Toxicity and radioprotective activity of p-aminopropiophenone in mice. *Radiat. Res.* 16: 588 (1962).

27. Plzak, V., and Doull, J. Toxicity and radioprotective effects of acetyl p-aminopropiophenone in mice. *Radiat. Res.* 19: 228 (1963).

28. Oldfield, D. G., Doull, J., Plzak, V., Hasegawa, A., and Sandberg, A. Protection of proton-irradiated mice with p-aminopropiophenone (PAPP) and 2-mercaptoethylamine (MEA). *Radiat. Res.* 19: 229 (1963).

29. Plzak, V., Hasegawa, A. T., and Doull, J. Radioprotective effects of cyclobutane derivatives in mice. *Radiat. Res.* 22: 224 (1964).

30. Vesselinovitch, D., and Doull, J. Effect of adding Co-ral to the diet of rats and mice. *Lab. Anim. Care* 14: 325 (1964).

2021522309

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31. Doull, J., Oldfield, D. G., and Plzak, V. Chemical protection against high energy proton radiation in mice. *Blood, The Journal of Hematology* 24: 638 (1964).

32. Oldfield, D. G., Doull, J., and Plzak, V. Chemical protection against 440 Mev protons in mice treated with mercaptoethylamine (MEA) or p-aminopropiophenone (PAPP). *Radiat. Res.* 26: 12 (1965).

33. Oldfield, D. G., Doull, J., and Plzak, V. Chemical protection against absorber moderated protons. *Radiat. Res.* 26: 25 (1965).

34. Plzak, V., and Doull, J. Dose reduction factors (DRF) for various radioprotective agents in mice. *Radiat. Res.* 25: 228 (1965).

35. Plzak, V., and Doull, J. Comparative subacute oral toxicity of some organic phosphates in rats and dogs. *Toxicol. Appl. Pharmacol.* 8: 350 (1966).

36. Goepp, R. A., Fitch, F. W., and Doull, J. The use of parenteral chemical for protection against oral radiation death in mice. *Radiat. Res.* 31: 149 (1967).

37. Doull, J. Pharmacologic responses in irradiated animals. *Radiat. Res.* 30: 333 (1967).

38. Plzak, V., and Doull, J. A further survey of compounds for radiation protection. *USAF School of Aerospace Med. Report*, #SAM TR 69-1: 1 (1969).

39. Goldstein, G. M., and Doull, J. Treatment of nitrite-induced methemoglobinemia with hyperbaric oxygen. *Proc. Soc. Exp. Biol. Med.*, 138: 137 (1971).

40. DeFeo, F. G., Fitzgerald, T. J., and Doull, J. Synthesis and biologic activity of p-hydroxylaminopropiophenone. *J. Med. Chem.*, 15: 1185 (1972).

41. Doull, J. The effect of physical environmental factors on drug response. In *Essays in Toxicology* (W. J. Hayes, ed.), Chapter 2, Academic Press, New York, N.Y. (1972).

42. Fitzgerald, T. J., Doull, J., and DeFeo, F. G. Radioprotective activity of p-aminopropiophenone: structure activity relationships. *Radiat. Res.* 55: 3 (1973).

43. Hurwitz, A., and Doull, J. Effect of irradiation on gastrointestinal drug absorption. *Radiat. Res.* 59: 606 (1974).

44. Doull, J. Factors influencing toxicity. In *Casarett and Doull's Toxicology: The Basic Science of Poisons* (J. Doull and L. J. Casarett, eds.), Chapter 5, Macmillan Publishing Co., Inc., N.Y. (1975).

45. Doull, J., and Casarett, L. J. (eds.). *Casarett and Doull's Toxicology: The Basic Science of Poisons*, Macmillan Publishing Co., Inc., N.Y. (1975).

2021522310

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

46. Doull, J. Evaluation of the toxicity of food additives. *Proc. Sixth Internat. Congress of Pharmacol.* 6: 115 (1975).

47. Doull, J. Pesticide-induced delayed neurotoxicity. In *Pesticide Induced Delayed Neurotoxicity* (R. L. Baron, ed.), EPA 600/1-76-025, Chapter 8, Washington, D.C. (1976).

48. Doull, J. The treatment of insecticide poisoning. In *Insecticide Biochemistry and Physiology* (C. A. Wilkerson, ed.), Chapter 16, Plenum Press, New York, N.Y. (1976).

49. Doull, J., and Walaszek, E. J. The use of Computer Assisted Teaching Systems in Pharmacology. In *Computers in Medical Education* (E. DeLand, ed.), Chapter 12, Plenum Pub. Co., New York, N.Y. (1977).

50. Doull, J., Klaassen, C. D., and Amdur, M. O. (eds.). *Casarett and Doull's Toxicology: The Basic Science of Poisons*, 2nd Ed., Macmillan Publishing Co., Inc., N.Y. (1980).

51. Klaassen, C. D., and Doull, J. Evaluation of safety: toxicologic evaluation. In *Casarett and Doull's Toxicology: The Basic Science of Poisons*, (J. Doull, C. D. Klaassen and M. Amdur, eds.), pp. 28-55, Macmillan Publishing Co., Inc., N.Y. (1980).

52. Misawa, M., Doull, J., Kitos, P. A., and Uyeki, E. M. Teratogenic effects of cholinergic insecticides in chick embryos. I. Diazinon treatment on acetylcholinesterase and choline acetyltransferase activities. *Toxicol. Appl. Pharmacol.* 57: 20-29 (1981).

53. Misawa, M., Doull, J., and Uyeki, E. M. Mechanisms of teratology induced by organophosphates. *8th Int. Congress of Pharmacology*, July 19-24, Tokyo, Japan (1981). (Abst.)

54. Eigenberg, D., Pazdernik, T., and Doull, J. Hemoperfusion: a possible alternative method for treating organophosphate insecticide poisoning. *The Toxicologist* 1: 136 (1981).

55. Doull, J. Assessing pesticide toxicity in man and correlations with laboratory animal studies. In J. Miyamoto et al. (ed.). IUPAC Pesticide Chemistry, Kyoto, Japan, Pergamon Press (1983).

56. Klaassen, C. D., Amdur, M. O., and Doull, J. (eds.). *Casarett and Doull's Toxicology: The Basic Science of Poisons*, 3rd Ed., Macmillan Publishing Co., Inc., N.Y. (1986).

57. Doull, J., and Bruce, M. C. Origin and scope of toxicology. In *Casarett and Doull's Toxicology: The Basic Science of Poisons* (C. D. Klaassen, M. O. Amdur and J. Doull, eds.), pp. 3-10, Macmillan Publishing Co., Inc., N.Y. (1986).

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B

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R: REDACTED MATERIAL

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CURRICULUM VITAE

NAME: John Paul Frawley

CURRENT HOME ADDRESS:

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DATE OF BIRTH:

PLACE OF BIRTH: Washington, D.C.

BUSINESS ADDRESS: Health & Environment International, Ltd.
111 Chestnut Avenue
Wilmington, Delaware 19809

EDUCATION:

Georgetown University	B.S. - Chemistry	1948
Georgetown University	M.S. - Biochemistry	1948
Georgetown University	Ph.D. - Biochemistry	1950

PROFESSIONAL EXPERIENCE:

1. President
Health & Environment International, Ltd.
Founder and president of consulting firm specializing in strategic management. Principal areas of expertise include risk management, health hazard evaluation, liability assessment, hazard communication, crisis potential evaluation, trial preparation and staff audits. Clients include chemical, pharmaceutical, agricultural chemical and consumer product corporations, legal firms and insurance companies.

2. General Manager, Health and Environment

Hercules Incorporated
Wilmington, Delaware 19894

Dates: September 1982 to May 1989

World-wide corporate management responsibility for all health and environment matters; corporate responsibility for risk assessment. Responsible for establishing policies, staffing, budgeting, coordinating and managing the activities of the following corporate functions: occupational health, medical, industrial hygiene, toxicology, regulatory compliance, microbiology, environmental affairs, environmental engineering, also corporate audit responsibility for safety and loss prevention. Principal expert witness and corporate spokesman on all health and environmental matters.

3. Chairman, Board of Directors

Adria Laboratories, Incorporated
Columbus, Ohio 43216

Dates: Member, June 1973 to June 1983
Chairman, November 1981 to June 1983

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PROFESSIONAL EXPERIENCE (continued)

General management and professional responsibility for organizing, staffing and operations of $100 million pharmaceutical company, jointly owned by Hercules and Montedison.

4. Corporate Director of Toxicology and Regulatory Compliance

Hercules Incorporated
Wilmington, Delaware 19894

Dates: January 1978 to September 1982

World-wide corporate responsibility for evaluation of health and environmental hazards associated with the manufacture and use of Hercules products. Also responsible for assuring compliance with various government regulations concerning potential hazard to health or the environment.

5. Corporate Director of Toxicology

Hercules Incorporated
Wilmington, Delaware 19894

Dates: July 1972 to December 1977

World-wide corporate responsibility for evaluation of health and environmental hazards associated with the manufacture and use of Hercules products.

6. Chief Toxicologist

Hercules Incorporated
Wilmington, Delaware 19899

Dates: December 1956 to July 1972

Responsible for identifying the needs of the Company in the fields of industrial hygiene and product toxicology, arrange and design experimental studies in these fields, put information in the hands of safety managers of plants involved and handle necessary contacts with Government agencies.

7. Assistant Chief, Chronic Toxicity Branch

Food and Drug Administration
Washington, D.C.

Dates: March 1954 to December 1956

Responsible for conduct of subacute, chronic and carcinogenic toxicological experiments on dyes, organic phosphate insecticides, irradiated food, etc. All work was intended to provide information necessary for safe handling of materials by industrial and agricultural workers, or for safe ingestion by consumers.

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PROFESSIONAL EXPERIENCE (continued)

8. United States Army

a. Assistant Chief
Biochemistry Department
Army Medical Service Graduate School

b. Chief of Laboratory
Surgical Research Team of Korea

Dates: February 1952 to March 1954

Conducted studies on the effect of lack of sleep on metabolism of the brain. Established and staffed laboratory at MASH hospital in Korea to investigate the effectiveness of plasma expanders in controlling blood pressure in combat casualties, and to study their metabolism and toxicity.

9. Lecturer in Biochemistry

Georgetown University
Washington, D.C.

Dates: September 1949 to February 1952

Conducted independent course in General Biochemistry in Graduate School.

10. Pharmacologist

Food and Drug Administration
Washington, D.C.

Dates: July 1948 to February 1952

Conducted investigations on toxicity of synthetic sweetening agents, emulsifiers, chlorinated and organic phosphate insecticides, etc. All work intended to provide information necessary for safe handling of materials by industrial and agricultural workers, or for safe ingestion by consumers.

11. Laboratory Instructor in Chemistry

Georgetown University
Washington, D.C.

Dates: September 1947 to June 1948

Served as laboratory instructor in inorganic and organic chemistry laboratories and assisted in grading examinations in these courses.

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ACCREDITATIONS

Certified in 1981 by American Board of Toxicology
Certified in 1981 by Academy of Toxicological Sciences
Certified in 1960 by American Board of Industrial Hygiene

MEMBERSHIP IN TECHNICAL SOCIETIES

REDACTED

REDACTED

OTHER ACTIVITIES

Associate Editor of "Regulatory Toxicology and Pharmacology" Journal, 1981-present

President, The Academy of Toxicological Sciences, 1987-1990; Past President 1990 - present

Chairman, Governing Board, Council for Health and Environmental Safety of Soil, 1987 to present

Member, U. S. Delegation of the Codex Alimentarius Committee on Pesticide Residues, 1965 to present

Trustee, Medical Center of Delaware, 1988-present

Member, Agricultural Board of the National Research Council, 1968-1972, Vice Chairman, 1971-72

Member, Governor's Scientific Advisory Committee for Delaware, 1967-68

Member, Advisory Panel on Interactions, Secretary's Commission of Pesticides and Their Relationship to Environmental Health (Mrak Commission), U. S. Department of Health, Education and Welfare, 1969

Member, Advisory Board, Delaware Cancer Network, 1978-81

Member, Professional Standards Evaluation Board (PSEB), Academy of Toxicological Sciences, 1982 to 1986

AWARDS

Lea Hitchner Award - National Agricultural Chemicals Association - 1968

Arnold J. Lehman Award - Society of Toxicology - 1987

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SCIENTIFIC PUBLICATIONS

John P. Frawley, Ph.D.

1) An Ultraviolet Spectrophotometric Method for the Quantitative Estimation of Benzene Hexachloride in Milk
Frawley, J. P. and Davidow, B. J.
Assoc. Off. Agric. Chem., 32:758 (1949)

2) Rate of Disappearance of the Isomers of Benzene Hexachloride from Fat Deposits in Rats
Frawley, J. P. and Fitzhugh, O. G.
Fed. Proc., 8:292 (1949)

3) The Chronic Toxicity of Technical Benzene Hexachloride and Its Alpha, Beta and Gamma Isomers
Fitzhugh, O. G., Nelson, A. A. and Frawley, J. P.
J. Pharm. and Exp. Therap., 100:59 (1950)

4) Factors Affecting Tissue Distribution Following Oral Ingestion of Lipid Soluble Substances
Frawley, J. P. and Fitzhugh, O. G.
Fed. Proc., 9:273 (1950)

5) Tissue Distribution, Accumulation and Elimination of the Isomers of Benzene Hexachloride
Davidow, B. and Frawley, J. P.
Proc. Soc. Exp. Biol. and Med., 76:780 (1951)

6) Rate of Recovery of Plasma, Red Cell and Brain Tissue of Rats Following Cholinesterase Inhibition by Organic Phosphates
Frawley, J. P. and Hagan, E. C.
Fed. Proc., 10:297 (1951)

7) Relationship of Blood and Brain Cholinesterase Levels to Acute Oral Toxicities of Some Organic Phosphates
Hagan, E. C. and Frawley, J. P.
Fed. Proc., 10:304 (1951)

8) A Comparison of the Chronic Toxicities of Synthetic Sweetening Agents
Fitzhugh, O. G., Nelson, A. A. and Frawley, J. P.
Amer. Pharm. Assoc., Sc. Ed., 40:583 (1951)

9) Effect of Liver Damage on the Toxicity of Octamethyl Pyrophosphoramide (OMPA)
Frawley, J. P., Laug, E. P. and Fitzhugh, O. G.
Fed. Proc., 11:347 (1952)

10) Effect of Emulsifying Agents on the Intestinal Content of the White Rat
Bourke, A. R., Frawley, J. P. and Fitzhugh, O. G.
Fed. Proc., 11:325 (1952)

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11) A Comparative Pharmacological and Toxicological Study of Organic Phosphate-Anticholinesterase Compounds
Frawley, J. P., Hagan, E. C. and Fitzhugh, O. G.
J. Pharm. and Exp. Therap., 105:156 (1952)

12) A Procedure for the Biological Assay of Insecticides by Oral Administration to Flies
Frawley, J. P., Laug, E. P. and Fitzhugh, O. G.
J. Assoc. Off. Agric. Chem., 35:741 (1952)

13) The In Vivo Inhibition of Fly Cholinesterase as a Measure of Microgram Quantities of Organic Phosphate Insecticides
Frawley, J. P., Laug, E. P. and Fitzhugh, O. G.
J. Assoc. Off. Agric. Chem., 35:745 (1952)

14) The Fate of Dextran and Modified Gelatin in Casualties with Renal Insufficiency
Howard, J. M., Frawley, J. P., Artz, C., and Sako, Y.
Surg. Gyn. and Obst., 100:207 (1955)

15) Plasma Retention and Urinary Excretion of Dextran and Modified Fluid Gelatin in Combat Casualties
Frawley, J. P., Artz, C. P. and Howard, J. M.
Surgery, 37:384 (1955)

16) Clinical Observations on the Use of Dextran and Modified Fluid Gelatin in Combat Casualties
Artz, C. P., Howard, J. M. and Frawley, J. P.
Surgery, 37:612 (1955)

17) A Study of Plasma Amylase Activity in the Combat Casualty
Howard, J. M., Frawley, J. P. and Artz, C. P.
Annals Surg., 141:337 (1955)

18) Muscle Metabolism and Catabolism in Combat Casualties
Frawley, J. P., Howard, J. M. and Artz, C. P.
A.M.A. Arch. Surgery, 71:612 (1955)

19) Investigations of Serum Protein Changes in Combat Casualties
Frawley, J. P., Artz, C. P. and Howard, J. M.
A.M.A. Arch Surgery, 71:605 (1955)

20) Studies of Adrenal Function in Combat and Wounded Soldiers
Howard, J. M., Olney J., and Frawley, J. P.
Annals Surgery, 141:314 (1955)

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21) Procedures for Appraisal of the Toxicity of Chemicals in Foods, Drugs and Cosmetics, V. Range-Finding and Subacute Toxicity
Frawley, J. P.
Food, Drug and Cosmetic Law Journal, 10:703 (1955)

22) Myelin Degeneration in Chickens with Subacute Administration of Organic Phosphorous Insecticides
Frawley, J. P., Zwickey, R. E. and Fuyat, H. N.
Fed. Proc., 15:424 (1956)

23) Bestimmung des Dosen-Bereichs und der subakuten Toxicitat
Frawley, J. P.
Die Toxische Gesamtsituation Auf Dem Gebiet Der Menschlichen Ernahrung (1956)

24) Nerve Poisons
Frawley, J. P.
International Record of Medicine, 169:41 (1956)

25) The Effect of Low Dietary Levels of Parathion and Systox on Blood Cholinesterase Activity of Dogs
Frawley, J. P. and Fuyat, H. N.
J. Agri. and Food Chem., 5:346 (1957)

26) Marked Potentiation in Mammalian Toxicity from the Simultaneous Administration of Two Organic Phosphate Insecticides
Frawley, J. P., Hagan, E. C. and Fuyat, H. N.
J. Pharm. and Exp. Therap., 121:96 (1957)
[Abstract 119:147 (1957)]

27) Alteration of Toxicity of Parathion by Ultraviolet Light
Blake, J. R., Frawley, J. P., Cook, J. W. and Fitzhugh, O. G.
Fed. Proc., 16:1207 (1957)

28) Blood Cholinesterase Studies with Simultaneous Administration of Several Combinations of Organic Phosphate Insecticides
Williams, M. W., Fuyat, H. N., Frawley, J. P. and Fitzhugh, O. G.
Fed. Proc., 16:1484 (1957)

29) The Significance of Potentiation to the Safety of Food Additives
Frawley, J. P.
Food, Drug and Cosmetic Law Journal, 12:767 (1957)

30) Modification of the Michel Electrometric Technique for Dog and Rat Blood Cholinesterase
Williams, M. W., Frawley, J. P., Fuyat, H. N and Blake, J. R.
J. Assoc. Off. Agric. Chemists, 40:1118 (1957)

31) Effect of Light on Some of the Chemical and Biological Properties of Parathion
Frawley, J. P., Cook, J. W., Blake, J. R. and Fitzhugh, O. G.
J. Agric. and Food Chem., 6:28 (1958)

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32) In Vivo Effects of Paired Combination of Five Organic Phosphate Insecticides
Williams, M. W., Frawley, J. P. and Fitzhugh, O. G.
J. Agric. and Food Chem., 6:514 (1958)

33) The Effect of Parathion on Human Red Blood Cell and Plasma Cholinesterase
Williams, M. W., Cook, J. W., Blake, J. R., Jorgenson, P. S. and Frawley, J. P.
A.M.A. Arch. Ind. Health, 18:441-445 (1958)

34) Chronic Oral Toxicities of Four Stearic Acid Emulsifiers
Fitzhugh, O. G., Bourke, A. R., Nelson, A. A. and Frawley, J. P.
Toxic. and Appl. Pharm., 1:315-331 (1959)

35) Safe Tolerances for Pesticides in Milk
Frawley, John P.
News and Pesticide Review, 18:6-7 (1959)

36) Toxicologist Reacts to Food Law
Frawley, J. P.
Chemical Processing, (March, 1960)

37) Corporate Responsibility in Environmental Toxicology
Frawley, J. P.
Hercules Chemist, Number 40, (October, 1960)

38) Process of Discovering and Developing a Marketable Pesticide
Frawley, John P.
Entoma, 1961-62

39) Toxicologic Investigations on Delnav
Frawley, J. P., Weir, R., Tusing, T., DuBois, K. P. and Calandra, J. C.
Toxicology and Applied Pharmacology, 5:605-624 (1963)

40) Statement before the Subcommittee on Re-Organization and International Organizations of the Senate Committee on Government Operations
Washington, D. C.
October 9, 1963

41) Our Sacred Food--A Perspective
(Guest Article)
J. P. Frawley
Information Bulletin of the British Industrial Biological Research Assn.
September (1964) Volume 3, No. 7

42) The Chronic Oral Toxicity of Series of Rosin Products
Toxicology and Applied Pharmacology (Abstracted)
John P. Frawley and Joseph C. Calandra
Volume 6, No. 3, May, 1964

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43) Studies on the Gastro-intestinal Absorption of Purified Sodium Carboxymethylcellulose
J. P. Frawley, A. K. Wiebe, and E. D. Klug ;and M. V. Shelanski
Food and Cosmetics Toxicology, Volume 2, pp 539 543, November, 1964

44) Investigations Establishing the Safety of Rosin Products for Food, Food Packaging Applications
J. P. Frawley
Naval Stores Review, March, 1965

45) The Residue of BHT and Metabolites in Tissue and Eggs of Chickens
J. P. Frawley, J. H. Kay and J. C. Calandra
Food and Cosmetics Toxicology, September, 1965

46) Progress Report on Multigeneration Reproduction Studies in Rats Fed Butylated Hydroxytoluene (BHT)
J. P. Frawley, J. H. Kay, F. E. Kohn and J. C. Calandra
Food and Cosmetics Toxicology, September, 1965

47) (Articles of General Interest)—Our Sacred Food - A Perspective
Food and Cosmetics Toxicology, Volume 3, 1965

48) Synergism and Antagonism
(Proc. of the Conference on Research Needs and Approaches to the Use of Agricultural Chemicals from a Public Health Viewpoint, Held at the University of California) Edited by C.O. Chichester, Research in Pesticides 1965, Academic Press, New York

49) Quantitative Measurements of Induction of Hepatic Microsomal Enzymes by Various Dietary Levels of DDT and Toxaphene in Rats
F. K. Kinoshita, J. P. Frawley and K. P. DuBois
Toxicology and Applied Pharmacology, Volume 9, pp. 505-513 (1966)

50) The Health Significance of Environmental Pollution from Biindobioresoate
J. P. Frawley (Y. Elwarf)
Fd. Cosmet. Tox., Volume 4, pp. 565-566 (1966)
also appeared in
BIBRA Information Bulletin Volume 5, No. 3, pp. 214-215 (1966)

51) BIBRA Annual Scientific Meeting - Scientific Evidence and Common Sense as a Basis for Food-Packaging Regulations
J. P. Frawley
Fd. Cosmet. Toxicology, Vol. 5, pp. 293-308 (1967)

52) A Reasoned Approach to Regulation Based on Toxicologic Considerations
J. P. Frawley
Food, Drug Cosmetic Law Journal
Vol. 23, No. 5, pp. 260-270 May, 1968

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53) Quantitative Measurement of Inhibition of Aliesterases, Acylamidase, and Cholinesterase by EPN and Delnav
Kenneth P. DuBois, Florence K. Kinoshita and John P. Frawley
Toxicology and Applied Pharmacology Vol. 12, No. 2 pp. 273-284, March, 1968

54) 10 Years of Food Law - Has it Been Worth the Effort?
A. T. Spiher, Jr., and J. P. Frawley
Modern Packaging, Vol. 41, No. 9 112-125 (September, 1968)

55) Guidelines for Estimating Toxicologically Insignificant Levels of Chemicals in Food
Food Protection Committee Report
National Research Council, 1969

56) Comparative Inhibition of Aliesterases and Cholinesterase in Rats Fed Eighteen Organophosphorus Insecticides
Mei-Quey Su, Florence K. Kinoshita, J. P. Frawley and Kenneth P. DuBois
Toxicology and Applied Pharmacology, Vol. 20, 241-249 (1971)

57) Multigeneration Reproductive Effects of Three Pesticides in Rats
G. L. Kennedy, Jr., J. P. Frawley and J. C. Calandra
Toxicology and Applied Pharmocology, Vol. 25, 589-596 (1973)

58) Test Protocols and Limitations for Detection of Neurotoxicity
J. P. Frawley,
Pesticide Delayed Neurotoxicity EPA 600/1-76-025, July 1976

59) Negative Health Implications of the Delaney Philosophy
Conference on Scientific Basis for Interpretation of the Delaney Clause February 7, 1978, Washington, D.C., In Regulatory Aspects of Carcinogenesis and Food Additives: the Delaney Clause ISBN 0-12-192750-4 pp. 253-260, 1979, Academic Press, Inc., New York, San Francisco, London

60) Techniques for Deriving Realistic Estimates of Pesticide Intakes
Proceedings from the International Union Pure and Applied Chemistry (IUPAC) July 1978, Zurich, Switzerland; Advances in Pesticide Science, Part 3, pp. 696-700, Pergamon Press Oxford and New York 1979

61) The 1980's - A Decade of Change
J. P. Frawley
Regulatory Toxicology and Pharmacology, 1:3-7, June 1981

62) The Influence of Toluene on the Leachability of TCDD From Soil
J. J. Ford, J. P. Frawley, F. K. Kinoshita and A. S. Hirwe
4th International Symposium on Chlorinated Dioxins and Related Compounds, October 1984, Ottawa, Ontario, Canada

63) Codex Alimentarius - Food Safety - Pesticides
J. P. Frawley
Food Drug Cosmetic Law Journal, Vol. 42 No. 2, 168-173 (1987)

64) Our Sacred Food -- A Perspective
John P. Frawley
Regulatory Toxicology and Pharmacology 9, 209-211 (1989)

J. P. Frawley [2363v]
Revised 11/6/89

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CURRICULUM VITAE

January, 1998

NAME: William Jacoo George

CURRENT ADDRESS: Room 4724 Libby Hall
Department of Pharmacology
1430 Tulane Avenue
New Orleans, LA 70112

TELEPHONE NUMBER: (504) 588-5444

SEX: Male

DATE AND PLACE OF BIRTH:

MARITAL STATUS:

WIFE'S MAIDEN NAME:

CHILDREN'S NAMES:

REDACTED

EDUCATION:

Moshannon Valley High School, Houtzdale, PA	1952-1956
Pennsylvania State University	
B.S. - Chemistry Major	1956-1960
University of Pittsburgh	
B.S. - Pharmacy Major	1961-1964
University of Michigan	
Ph.D. - Pharmacology Major	
Biochemistry Minor	1964-1968
University of Minnesota	
Postdoctoral Fellow	1968-1970

POSITIONS HELD:

Pharmacy Extern, McGee Hospital, Pittsburgh, Pennsylvania	1962-1964
Predoctoral Research Fellow, Department of Pharmacology University of Michigan	1964-1968
Postdoctoral Fellow, Department of Pharmacology, Univeristy of Minnesota	1968-1970
Assistant Professor, Department of Pharmacology, Tulane University	1970-1973
Associate Professor, Department of Pharmacology, Tulane University	1973-1978
Professor, Department of Pharmacology, Tulane University	1978-present
Director of Toxicology, Tulane University	1979-present
Adjunct Professor of Pathology	1983-present
Adjunct Professor of Environmental Health (School of Public Health & Tropical Medicine)	1984-present

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TEACHING EXPERIENCE:

Graduate Student Instructor, University of Michigan School of Medicine, School of Dentistry	1965-1968
University of Minnesota, School of Dentistry, School of Pharmacy	1968-1970
Tulane University, Medical Pharmacology, Undergraduate Pharmacology, Graduate School	1970-present.

HONORS AND AWARDS:

Pennsylvania Senatorial Scholarship	1956-1960
Carnaker Scholarship Award	1961-1964
Summa Cum Laude, University of Pittsburgh	1964
McKesson and Robbins Professional Service Award	1964
Lenn and Fink Gold Medal Award	1964
American Pharmaceutical Association Award	1964
A. R. Canter Award	1964
James H. Beal Memorial Scholarship	1964
Merck Faculty Development Award	1970
St. Louis Award	1980

PROFESSIONAL SOCIETIES:

1962
1966
1967
1972
1973
1973
1973
1973
1973
1974
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1978

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STATE, LOCAL AND NATIONAL COMMITTEES:

1975	International Advisory Committee for Research in Cyclic Nucleotides
1983	Committee on Convocations (ASPET)
1983	Society of Toxicology; Regional Councellor
1983	Environmental Institute for Hazardous Waste Management Studies
1984	Louisiana Board of Regents Liaison Committee
1985	Mayor's Committee on Hazardous Materials

UNIVERSITY COMMITTEES:

1975	Committee on Student Affairs
1976	Graduate Faculty, Tulane University
1976	Radioisotope Committee
1977	Tulane Budget Committee

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UNIVERSITY COMMITTEES (cont'd):

1978	Tulane Curriculum Committee
1978	Basic Science Rep. GME Advisory Council
1979	Committee on University Development
1980	Personnel and Honors Committee
1983	University Senator
1983	Committee on Research
1984-88	Pharmacy & Therapeutics Committee
1984	President's Advisory Committee
1985	Select Committee on University Athletics
1986	University Senate Committee on Athletics
1987	University Committee on Instrumentation

AREAS OF INTEREST:

Education - Undergraduate teaching and graduate training.

Research - Drug metabolism and intermediary metabolism
Erythropoiesis
Toxicology of commercial products
Cyclic nucleotides and cell proliferation
Analysis of drugs and other chemicals in biological tissues
Mechanisms of toxicology
Development of methods for analysis of alcohols, anti-depressants and anticonvulsants
Evaluation of industrial agents as carcinogens
Environmental toxicology
Adverse effect of cobalt on male reproduction
Hazardous waste management
Drug screening techinques and methodologies
Toxicity of Nitrogen dioxide

CURRENT RESEARCH PROJECTS:

1. Toxicology of drugs and pharmaceutical preparations
2. Studies on Toxicity of Nitrogen dioxide
3. Evaluation of relationships between ethanol, disulfiram and benzyl alcohol
4. Cyclic nucleotides and control of cell proliferation
5. Mechanism of toxicity of ethylene dichloride
6. Toxicity of cobalt on male reproduction
7. Diacylglycerols as regulators of cellular function
8. Organic solvents as carcinogens
9. Evaluation of the toxicity of Polychlorinated Biphenyls (PCBs)
10. An Update on Dioxin Toxicity
11. Development of Procedures used in Urine Drug Testing

RESEARCH AWARDS:

Various awards have been received from the National Institutes of Health, American Heart Association, private research foundations and the pharmaceutical industry.

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GRADUATE STUDENT COMMITTEES:

Major Advisor

George M. Rodgers, III, Ph.D. (1974) - Erythropoiesis and Cyclic Nucleotides
Daniel W. Briggs, Ph.D. (1974) - Metabolism of Erythropoietin
Ronald W. Susuttil, Ph.D. (1975) - Myocardial Anoxia and Cyclic Nucleotides
Robin E. Kreig, M.S. (1976) - Cyclic Nucleotides and Leydig Cell Tumors
LuAnn E. White, Ph.D. (1978) - Cyclic Nucleotides and Cellular Proliferation
*Daniel Halpren Ruder, Ph.D. (1978) - Mechanism of Luteinizing Hormone in Porcine Follicular Cells
Richard M. Graeff, Ph.D. (1980) - Protein Kinases in Myocandial Tissue
Richard J. Francowitch (1985) - Mechanism of Toxicity of Ethylene Dichloride
Steven M. Pincus, Ph.D. (1985) - Studies of Diacylglycerides and Phorbol Esters on Differentiation and Proliferation of Friend Erythroleukemic Cells
Nancy Pedigo (1986) - Evaluation of Toxicity of Cobalt on Reproduction in the Male
Sharon McCloskey (1986) - Toxicity of Benzyl Alcohol
Paul Siegel (1988) - Isocyanates and Pulmonary Toxicity

Other Graduate Student Dissertation or Thesis Committees

Dr. George has served on the dissertation or thesis committees of 28 other students (40 total) from the Departments of Biochemistry, Pharmacology, Chemistry, Anatomy and Environmental Health Sciences.

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BOOKS AND CHAPTERS (cont'd):

12. Halpren-Ruder, D. and George, W.: Luteinizing hormone induced changes in protein kinase profiles in the porcine follicular cell. Proceedings of the American Medical Student Research Forum, Galveston, Texas (1978).

13. George, W.J. and White, L.A.: Cyclic nucleotides in the regulation of cell proliferation. In: Cyclic Nucleotides and Therapeutic Perspectives, Vol. 1. Pergmon Press. Paris, France, pp. 97-108 (1979).

14. George, W.J., White, L.A. and Jeter, J.R.: Cyclic nucleotides and the control of erythroid cell proliferation. In: Nuclear-Cytoplasmic Interactions in the Cell Cycle. ed. by G.L. Whitson, Academic Press, pp. 293-308 (1980).

15. George, W.J. and Graeff, R.M. Cyclic nucleotides and cardiac function. In: Cardiac Pharmacology, Vol. II. ed. by R.D. Wilkerson, Academic Press, pp. 75-93 (1981).

16. White, L., Fisher, J.W. and George, W.J.: Role of erythropoietin and cyclic nucleotides in erythroid cell proliferation in fetal liver. Exp. Hematol. 8:168-181 (1981).

17. George, W.J.: Drug testing proceedings of the Food Marketing Institute. 1:17-27 (1987).

PUBLICATIONS:

18. George, W.J. and Tephly, T.R.: Studies on the N- and O-dealkylation of morphine analogues. Mol. Pharmacol. 4:504-509 (1968).

19. George, W.J., Polson, J.B., O'Toole, A.G. and Goldberg, N.D.: Changes in rat heart cyclic 3',5'-guanosine monophosphate levels following drug induced alterations in myocardial contractility. Proc. Natl. Acad. Sci. 66:398-403 (1970).

20. Rodgers, G.M., George, W.J. and Fisher, J.W.: Increased kidney cyclic AMP levels and erythropoietin production following cobalt administration. Proc. Soc. Exp. Biol. Med. 140:977-981 (1972).

21. Paulo, L.G., Wilkerson, R.D., Roh, B.L., George, W.J. and Fisher, J.W.: Effects of PGE on erythropoietin production. Proc. Soc. Exp. Biol. Med. 142:771-775 (1973).

22. George, W.J., Wilkerson, R.D. and Kadowitz, P.J.: Influence of acetylcholine on contractile force and cyclic nucleotide levels in the isolated perfused rat heart. J. Pharmacol. Expt. Ther. 184:228-235 (1973).

23. George, W.J., Kadowitz, P.J. and Wilkerson, R.D.: Role of cyclic GMP as mediator of the negative inotropic effects of acetylcholine in the perfused rat heart. In: Recent Advances in Studies on Cardiac Structure and Metabolism, Vol. III. University Park Press, Baltimore, Maryland, pp. 331-343 (1973).

2021522328

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

PUBLICATIONS (cont'd):

24. Briggs, D.W., George, W.J. and Fisher, J.W.: Metabolism of erythropoietin by hepatic lysosomes. Proc. Soc. Exp. Biol. Med. 144:394-400 (1973).

25. Ignarro, L.J., Paddock, R.J. and George, W.J.: Hormonal control of neutrophil lysosomal enzyme release. Science 183:855-857 (1974).

26. Rodgers, G.M., Fisher, J.W. and George, W.J.: Activation of the renal erythropoietic factor by a cyclic AMP dependent protein kinase. Proc. Soc. Exp. Biol. Med. 145:1207-1211 (1974).

27. Ignarro, L.J. and George, W.J.: Hormonal control of lysosomal enzyme release from human neutrophils. J. Exp. Med. 139:1396-1414 (1974).

28. Susuttil, R.W., Paddock, R.J. and George, W.J.: Protective effect of glucagon on the isolated perfused rat heart following severe hypoxia. Proc. Soc. Exp. Biol. Med. 147:527-532 (1974).

29. Rodgers, G.M., Fisher, J.W. and George, W.J.: Lactate stimulation of renal cortical adenylate cyclase. J. Pharmacol. Exp. Ther. 190:543-550 (1974).

30. Briggs, D.W., Fisher, J.W. and George, W.J.: Hepatic clearance of intact and desialyated erythropoietin. Am. J. Physiol. 227:1385-1389 (1974).

31. Ignarro, L.J. and George, W.J.: Hormonal control of lysosomal enzyme release from human neutrophils. Proc. Natl. Acad. Sci. 71:2027-2031 (1974).

32. Rodgers, G.M., Fisher, J.W. and George, W.J.: Elevation of renal cyclic GMP concentrations and plasma lysosomal enzymes following cobalt treatment. Biochem. Biophys. Res. Commun. 59:979-984 (1974).

33. Cohen, L.K., Smith, R.J. and George, W.J.: Metabolism of isoniazid in hypersensitive patients. Arch. Dermatol. 109:377-381 (1974).

34. Greenberg, S., George, W.J., Kadowitz, P.J. and Wilson, W.R.: Androgen-induced enhancement of vascular reactivity. Can. J. Physiol. Pharmacol. 52:1422, 1974.

35. Ignarro, L.J. and George, W.J.: Mediation of immunologic discharge by lysosomal enzymes from human neutrophils by guanosine 3',5'-monophosphate. J. Exp. Med. 140:225-238 (1974).

36. Kadowitz, P.J., Hyman, A.L., Joiner, P.D. and George, W.J.: Influence of prostaglandin E_1 and $E_{2\alpha}$ on pulmonary vascular resistance of isolated lobar vessels and cyclic nucleotide content. J. Pharmacol. Exp. Ther. 192: 677-687 (1975).

37. Rodgers, G.M., Fisher, J.W. and George, W.J.: The role of renal adenosine 3',5'-monophosphate in the control of erythropoietin production. Am. J. Med. 58:31-38 (1975).

2021522329

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

PUBLICATIONS (cont'd):

38. Rodgers, G.M., Fisher, J.W. and George, W.J.: Renal cortical cyclic AMP and erythropoietin production in the rat. Am. J. Physiol. 229:1387-1392 (1975).

39. Busuttil, R.W., George, W.J. and Hewitt, R.L.: Protective effect of methylprednisolone on the heart during ischemic cardiac arrest. J. Thorac. Cardiovasc. Surg. 70:955-965 (1975).

40. Rodgers, G.M., Fisher, J.W. and George, W.J.: Renal cyclic GMP and cholinergic mechanisms in erythropoietin production. Life Sci. 17:1807-1814 (1975).

41. Busuttil, R.W., Paddock, R.J., Fisher, J.W. and George, W.J.: Changes in cyclic nucleotide levels and contractile force in the isolated hypoxic rat heart during perfusion with glucagon. Circ. Res. 38:162 (1976).

42. George, W.J., White, L., Pazddock, R.J., Ignarro, L.J. and Kadowitz, P.J.: Oppositional effects of acetylcholine and isoproterenol on isometric tension and cyclic nucleotide concentrations in rabbit atria. J. Cyclic Nucleotide Res. 1:339-349 (1976).

43. Rodgers, G.M., Fisher, J.W. and George, W.J.: Elevated cyclic GMP concentrations in rabbit bone marrow culture and mouse spleen following erythropoietin stimulation. Biochem. Biophys. Res. Commun. 70:287 (1976).

44. Fink, G.C., Busuttil, R.W., Rodgers, G.M. and George, W.J.: Effects of vagal stimulation on cyclic nucleotide levels and rate of contraction in rabbit atria. Proc. Soc. Exp. Biol. Med. 153:78-82 (1976).

45. Wilkerson, R.D., Paddock, R.J. and George, W.J.: Effects of derivatives of cyclic AMP and cyclic GMP on contractile force in cat papillary muscle. Eur. J. Pharmacol. 36:247-251 (1976).

46. Busuttil, R.W. and George, W.J.: Protective action of methylprednisolone on the isolated perfused rat heart following severe hypoxia. Proc. Soc. Biol. Med. 157:578-581 (1978).

47. Busuttil, R.W. and George, W.J.: Possible role of cyclic nucleotides on the protective effect of methylprednisolone on the hypoxic rat heart. J. Cyclic Nucleotide Res. 3:510-522 (1978).

48. Fisher, J.W., Gross, D.M., Foley, J.E., Nelson, P.K., Rodgers, G.M., George, W.J. and Jubiz, W.: A concept for the control of kidney production of erythropoietin involving prostaglandins and cyclic nucleotides. Contr. Nephrol. 13:37-59 (1978).

49. Walpren-Ruder, D., Jungman, R. and George, W.J.: Mechanism of luteinizing hormone induced changes in protein kinase profiles. J. Endocrinol. 84:49-63 (1980).

50. White, L.A. and George, W.J.: Cyclic nucleotide modulation in fetal liver erythroid cells. Proc. Soc. Exp. Biol. Med. 166:186-193 (1981).

2021522330

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

PUBLICATIONS (cont'd):

51. Gershanik, J., Boecler, B., Ensley, H., McCloskey, S. and George, W.: The gasping syndrome and benzyl alcohol poisoning. N. Engl. J. Med. 307:1384-1388 (1982).

52. Katsuoka, Y., Beckman, B., George, W.J. and Fisher, J.W.: Extraction of erythropoietin from kidneys of rats treated with cobalt and hypoxia. Am. J. Physiol. 244:F129-F133 (1983).

53. Gershanik, J., Boecler, B., Ensley, H., McCloskey, S. and George, W.J.: Gasping syndrome and benzyl alcohol poisoning. Intelligence Reports in Obstetrics and Gynecology 1(4):10-11 (1983).

54. Rege, A.B., Lertora, J.J.L. and George, W.J.: A rapid gas liquid chromatographic assay for plasma valproic acid. J. Chromatog. 309:2397-2402 (1984).

55. Woo, F.L., Johnson, A.P., Caldwell, D.R., Lertora, J.J.L. and George, W.J.: Piperacillin distribution in tears and aqueous humor. Am. J. Ophthalmol. 98:17-20 (1984).

56. Pincus, S.M., Beckman, B.S. and George, W.J.: Inhibition of Dimethylsulfoxide induced differentiation in friend erythroleukemic cells by diacylglycerols and phospholipase C. Biochem. Biophys. Res. Commun. 125:491-499 (1984).

57. Woo, F.L., Johnson, A.P., Insler, M., George, W.J. and LaCorte, W.: Distribution of aminoglycoside antibiotics in tears and aqueous humor. Arch. Ophthalmol. 103:216-219 (1985).

58. Francovitch, R.J. and George, W.J. A dual function exposure system for acute exposure of mice to chemical vapors. J. Am. Coll. Toxicol. 4:63-69 (1985).

59. George, W.J., Martin, L.A. and White, L.A.: Toxicology of organic solvents. In: Monogram on Organic Solvents. ed. by P.E. LaMoreaux and R.J. Wells. Alabama Press Vol. 1, No. 1, 1-79 (1985).

60. Francovitch, R.J., Schor, N., Lertora, J.J.L. and George, W.J.: Effects of SKF 525-A and phenobarbital on ethylene dichloride toxicity. J. Am. Coll. Toxicol. 5:117-126 (1986).

61. McCloskey, S.E., Lertora, J.J.L., White, L.A. and George, W.J.: Evaluation of the mechanism of benzyl alcohol toxicity. J. Pharmaceut. Sciences 75:702-705 (1986).

62. George, C.J., Bennett, G., Simoneaux, D., and George, W.J.: Toxicology of polychlorinated biphenyls. In: Monogram on Hazardous Waste Products. Ed. P.E. LaMoreaux and R.J. Wells, Alabama Press 17:1-48 (1987).

63. Insler, M., Helm, C.R. and George, W.J.: Topical vs systemic gentamicin penetration into the human cornea and aqueous humor. Archives of Ophthalmology 105:922-924 (1987).

2021522331

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

PUBLICATIONS (cont'd):

64. Rege, A.B., Weiner, J.S., Boineau, F.G. and W.J. George: Measurement of cyclosporine in whole blood of renal transplant patients. J. Chromatography (submitted for publication) (1988).

65. Pedigo, N.G., George, W.J. and Anderson, M.L.: Effect of acute and chronic exposure to cobalt on the male reproductive system in mice. Journal of Reproductive Toxicology (submitted for publication) (1988).

66. George, C.J., Bennett, G.F., Simoneaux, D. and George, W.J.: Toxicity of Polychlorinated Bionemyls. J. Hazardous Chemicals (in press) (1988).

67. Siegel, P.D. and George, W.J.: Murine pulmonary biochemical response to acute and subacute exposure to nitrogen dioxide. Archives of Environ. Health (submitted for publication) (1988).

68. George, W.J. and Agrawal, K.C.: The zero threshold concept and carcinogenesis. Comments on Toxicology (in review) (1987).

69. George, W.J., Agrawal, K.C., and Silver, C.: Fallacy of the zero threshold concept in carcinogenesis. Proceedings of the Environmental Institute for Hazardous Waste Management (in review) (1988).

70. Pincus, S.M., George, W.J., Beckman, B.S. and Jeter, J.R.: Effect of 12-O-tetradecanyol-phorbol-13 acetate on protein phosphorylation in Friend erythroleukemic cells. Cancer Res. (submitted for publication) (1988).

71. George, William J., Schulte, Charles E., Simoneaux, D.E., and McCloskey, Sharon E.: Laboratory aspects of drug testing in athletics. Journal of American College Health (submitted for publication) (1988).

72. Rege, A.B., Wang, T., Lertora, J.L.L. and George, W.J.: A rapid simple HPLC-UV assay for flecainide. J. of Chromatography (submitted for publication) (1988).

73. Rege, A.B., Wang, T., Lertora, J.J.L. and George, W.J.: A rapid simple HPLC-UV assay for tocainide. J. of Chromatography (submitted for publication) (1988).

74. Wilson, J. Michael, George, Camille J., Bennett, Gary, Zimmerman, Rae and George, William: Monogram on Hazardous Waste Products. ed. P.E. LaMoreaux and R.J. Wells. Alabama Press (in preparation) (1988).

75. Rege, A.B., Krieger, S., Bliss, B. and George, W.J.: Simultaneous analysis of acetaminophen, salicylates, and theophylline by high pressure liquid chromatography. Clin. Chem. (in preparation) (1988).

76. Rege, A.B., Gallo, R. and George, W.J.: Studies on acetylation phenotypes using high pressure liquid chromatography. J. Pharmacol. Exp. Ther. (in preparation) (1988).

77. Rege, A.B., Cockerham, K. and George, W.J.: Measurement of vanillin and ethyl vanillin by high pressure liquid chromatography. J. Pharmacol. Sci. (in preparation) (1988).

2021522332

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

PUBLICATIONS (cont'd):

78. Ogden, N., Rege, A.B. and George, W.J.: Azlocillin levels in tears. (in preparation) (1988).

79. Rege, A.B., Wisdom, G., Giles, T. and George, W.J.: High performance liquid separation of enkephalins for measurement by radioimmunoassay. (in preparation) (1988).

2021522333

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS:

1. George, W.J. and Teehly, T.R.: Evidence for different mechanisms operative in the N' and O-dealkylation of morphine analogues by rat liver microsomes. The Pharmacologist 9:2 (1967).

2. George, W.J. Rodgers, G.M., Gibson, J.L. and Harbison, R.D.: Morphine and ethylmorphine metabolism in neonatal and adult rats. Fede. Proc. 39:2035 (1971).

3. Rodgers, G.M., George, W.J. and Fisher, J.W.: Cyclic nucleotides and erythropoiesis. The Pharmacologist 13:287 (1971).

4. Rodgers, G.M., George, W.J. and Fisher, J.W.: Cyclic AMP and the erythropoietic response to cobalt. Proc. Am. Soc. Hematol. 14 (1971).

5. Rodgers, G.M., George, W.J. and Fisher, J.W.: Kidney cyclic AMP levels in rats following erythropoietin stimulation. Fed. Proc. 31:1921 (1972).

6. George, W.J., Polson, J.B. and Kadowitz, P.J.: Influence of acetylcholine on contractility of the isolated perfused rat heart. Fifth Intl. Cong. Pharmacol. 5:80 (1972).

7. Briggs, D.W., George, W.J. and Fisher, J.W.: Erythropoietin inactivation by rat liver lysosomes. Fifth Intl. Cong. Pharmacol. 5:29 (1972).

8. George, W.J., Paddock, R.J. and Kadowitz, P.J.: Effects of prostaglandins on contractility of the isolated perfused rat heart. Fifth Intl. Cong. Pharmacol. 5:80 (1972).

9. Paulo, L.G., Wilkerson, R.D., George, W.J., Roh, B.L. and Fisher, J.W.: Effects of prostaglandin E_1 on erythropoietin. Fifth Intl. Cong. Pharmacol. 5:252 (1972).

10. Rodgers, G.M., George, W.J. and Fisher, J.W.: Renal cyclic adenosine 3',5'-monophosphate as a possible mediator of erythropoietin production. SAMA-UTM Research Forum, April (1972).

11. George, W.J., Kadowitz, P.J. and Wilkerson, R.D.: Role of cyclic GMP as a mediator of the negative inotropic effect of acetylcholine in the perfused rat heart. Proceedings of the International Study Group in Cardiac Metabolism, Winnipeg, Manitoba 5:59 (1972).

12. Kadowitz, P.J., George, W.J. and Hyman, A.L.: Effects of prostaglandins E_1 and F_2 on adrenergic responses in the pulmonary circulation. Proceedings of the International Conference on Prostaglandins, Vienna (Sept., 1972).

13. Hyman, A.L., George, W.J. and Kadowitz, P.J.: Spectrum of effects of prostaglandins E, A and F in the pulmonary circulation of the intact dog. Proceedings of the American Heart Association (November, 1972).

2021522334

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

14. Hyman, A.L., Joiner, P.D., George, W.J. and Kadowitz, P.J.: Influence of prostaglandins E_1 and F_2 on vascular resistance, responses to norepinephrine and cyclic 3',5'-adenosine monophosphate levels in the pulmonary circulation. Proc. South. Soc. Clin. Invest. (January, 1973). Clin. Res. 21:81 (1973).

15. George, W.J., Paddock, R.J., White, L.A., Smith, R.J. and Wilkerson, R.D.: The relationship of cyclic nucleotides to contractile responses of isolated cat papillary muscles. Proc. South. Soc. Clin. Invest. Clin. Res. 21:99 (1973).

16. Rodgers, G.M., Fisher, J.W. and George, W.J.: Cobalt induced erythropoiesis associated with alterations in the synthesis and degradation of renal cyclic AMP. Proc. Am. Soc. Hematol., Hollywood, Florida, Dec., 1972. 15:105 (1972).

17. Wilkerson, R.D., Paddock, R.J. and George, W.J.: Interaction of cyclic GMP and cyclic AMP on contractile force in cat papillary muscles. Fed. Am. Soc. Exp. Biol. 32:712 (1973).

18. George, W.J. and White, L.A.: Effects of guanosine 3',5'-monophosphate and adenosine 3',5'-monophosphate on calcium accumulation in the rat cardiac microsomes. Fed. Am. Soc. Exp. Biol. 32:711 (1973).

19. Rodgers, G.M., Fisher, J.W. and George, W.J.: Renal cyclic AMP and erythropoietin production. Fed. Am. Soc. Exp. Biol. 32:802 (1973).

20. Noveck, R.J., George, W.J. and Fisher, J.W.: Increased levels of renal cyclic AMP and plasma erythropoietin levels in dogs following 5-hydroxytryptamine infusion. Fed. Am. Soc. Exp. Biol. 32:775 (1973).

21. Briggs, D.W., Fisher, J.W. and George, W.J.: Erythropoietin inactivation by hepatic subcellular fractions. Fed. Am. Soc. Exp. Biol. 32:716 (1973).

22. George, W.J., Paddock, R.J. and Ignarro, L.J.: Cyclic 3',5-adenosine monophosphate levels in human neutrophils during lysosomal enzyme release. The Pharmacologist 15:157 (1973).

23. White, L.E., Ignarro, L.J. and George, W.J.: Stimulation of rat guanyl cyclase by acetylcholine. The Pharmacologist 15:16 (1973).

24. Rodgers, G.M., Fisher, J.W. and George, W.J.: A cyclic AMP-dependent mechanism for hypoxia-induced erythropoietin production. Am. Soc. Hematol. 16:161 (1973).

25. George, W.J., Rodgers, G.M. and Fisher, J.W.: Renal adenylate cyclase: A possible regulatory site for erythropoietin production following cobalt treatment in hypoxic stimulation. Am. Soc. Nephrol. 6:42 (1973).

26. Rodgers, G.M., Fisher, J.W. and George, W.J.: Renal cortical cyclic AMP as a mediator of erythropoietin production. Clin. Res. 22:67 (1974).

2021522335

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

27. Rodgers, G.M., Fisher, J.W. and George, W.J.: Activation of renal cortical adenylate cyclase (AC) by lactate as a mechanism in the renal production of erythropoietin. Fed. Proc. 33:355 (1974).

28. Hyman, A.L., George, W.J., Joiner, P.D. and Kadowitz, P.J.: Influence of acetylcholine on pulmonary resistance, isolated lobar vessels and cyclic nucleotide levels. Circulation 48:456 (1973).

29. Ignarro, L.J., White, L.E., Wilkerson, R.D. and George, W.J.: Cardiac guanyl cyclase stimulation by acetylcholine and calcium. Circulation 48: 12 (1973).

30. Ignarro, L.J. and George, W.J.: Hormonal control of lysosomal enzyme release for human neutrophils by autonomic neurohumors and cyclic nucleotides. Clin. Res. 22:58 (1974).

31. Paddock, R.J., Wilkerson, R.D., Ignarro, L.J. and George, W.J.: Effects of derivatives of cyclic GMP and cyclic AMP on contractile force of cat papillary muscle. Clin. Res. 22:56 (1974).

32. Briggs, D.W., Fisher, J.W. and George, W.J.: Effects of desialyation upon hepatic uptake of erythropoietin. Clin. Res. 22:65 (1974).

33. White, L.E., Ignarro, L.J. and George, W.J.: Kinetic effects of acetylcholine on cardiac guanyl cyclase. Clin. Res. 22:57 (1974).

34. Busuttil, R.W., Paddock, R.J. and George, W.J.: Protective effect of glucagon on the isolated perfused rat heart. Clin. Res. 22:54 (1974).

35. Briggs, D.W., Fisher, J.W. and George, W.J.: Effects of orosomucoid and neuraminidase on the clearance of erythropoietin by the isolated perfused liver. Fed. Proc. 33:355 (1974).

36. George, W.J., Rodgers, G.M. and Fisher, J.W.: Regulation of erythropoiesis by cyclic AMP and cyclic GMP. Intl. Conf. Cyclic AMP 2:66 (1974).

37. Rodgers, G.M., Fisher, J.W. and George, W.J.: Lactate stimulation of renal cortical adenylate cyclase. Texas Rept. Biol. Med. (1974).

38. Rodgers, G.M., Fisher, J.W. and George, W.J.: Cyclic GMP and erythropoiesis. The Pharmacologist 15:309 (1974).

39. Busuttil, R.W., Paddock, R.J. and George, W.J.: Effects of glucagon on cardiac cyclic nucleotides in the hypoxic heart. Proc. Intl. Study Gp. Res. Cardiac Metab. 7:83 (1974).

40. Ignarro, L.J. and George, W.J.: Regulation of lysosomal enzyme discharge from human neutrophils. Proc. Intl. Conf. Cyclic AMP 2:52 (1974).

2021522336

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

41. George, W.J., Kadowitz, P.J. and Ignarro, L.J.: Effects of autonomic agents on force of contraction and levels of cyclic AMP or cyclic GMP in isolated paced atria. Proc. Intl. Conf. Cyclic AMP 2:69 (1974).

42. Kadowitz, P.J., Joiner, P.D., Hyman, A.L. and George, W.J.: Influence of prostaglandin E_1 and F_2 on pulmonary vascular resistance and cyclic nucleotide levels. Advances in cyclic nucleotide research. Proc. Intl. Conf. Cyclic AMP 2:73 (1974).

43. George, W.J., Briggs, D.W., Rodgers, G.M. and Fisher, J.W.: Hepatic inactivation of erythropoietin. XVth Intl. Congr. Hematol., Jerusalem, Israel. 15:203 (1974).

44. George, W.J., Rodgers, G.M., Briggs, D.W. and Fisher, J.W.: Role of cyclic AMP in the regulation of erythropoietin production. Proc. Intl. Symp. Erythropoietin, Tokyo, Japan 4:36 (1974).

45. Ignarro, L.J., Cech, S.Y. and George, W.J.: Mediation of lysosomal enzyme secretion from human neutrophils by guanosine 3',5'-monophosphate: Requirement of calcium and inhibition of adenosine 3',5'-monophosphate. Pharmacologist 16:309 (1974).

46. Fink, G.D., Paddock, R.J., Rodgers, G.M., Nobles, J.A. and George, W.J.: Elevated cyclic GMP levels in rabbit atria during vagal stimulation. Pharmacologist 16:288 (1974).

47. Rodgers, G.M., Fisher, J.W. and George, W.J.: Cholinergic mechanisms in erythropoietin. Proc. Am. Soc. Hematol. 17:64 (1974).

48. Rodgers, G.M., Fink, G.D., Fisher, J.W. and George, W.J.: An evaluation of erythropoietic function in New Zealand black mice. Proc. Am. Soc. Hematol. 17:101 (1974).

49. Busuttil, R.W., Paddock, R.J. and George, W.J.: Effects of glucagon on cyclic nucleotide levels and cardiac performance in isolated perfused hearts following hypoxia. Fed. Proc. 33:344 (1974).

50. George, W.J., Rodgers, G.M., Fink, G.D. and Fisher, J.W.: Role of cyclic AMP and cyclic GMP in kidney production of erythropoietin. Symposium on Regulation of Erythropoiesis, Prague, Czechoslovakia (in press).

51. Rodgers, G.M., Fink, G.D., Fisher, J.W. and George, W.J.: Renal cyclic AMP and the erythropoietic response to hemolytic anemia in mice. Fed. Proc. 34:694 (1975).

52. George, W.J., Paddock, R.J., Fink, G.D. and Rodgers, G.M.: Cyclic nucleotides as messengers of vagal action on the in vivo rabbit atrium. Fed. Proc. 34:366 (1975).

53. Ignarro, L.J., Cech, S.Y. and George, W.J.: Inhibition of cyclic GMP accumulation in, and lysosomal enzyme secretion from, human neutrophils by glucocorticoids. Fed. Proc. 34:231 (1975).

2021522337

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

54. Busuttil, R.W., Ignarro, L.J., Shirkey, H.C. and George, W.J.: Improved recovery of the anoxic heart with methylprednisolone, a mechanism involving lysosomal enzyme release by cyclic nucleotides. Fed. Proc. 34:265 (1975).

55. Krieg, D.W., Davis, K., Rice, B.F. and George, W.J.: Hyperkalcemia and increased nephrogenous cyclic AMP production in neoplasia. Fed. Proc. 59:312 (1975).

56. Briggs, D.W., George, J.M., Fisher, J.W. and George, W.J.: Effects of SKF 525A and disulfiram on plasma clearance of erythropoietin by the isolated perfused rat liver. Fed. Proc. 59:805 (1975).

57. George, W.J. and Busuttil, R.W.: Relationships between myocardial cyclic nucleotide content and lysosomal enzyme release in the anoxic heart following pretreatment with methylprednisolone. 6th Intl. Congr. Pharmacol. Helsinki, Finland (1975).

58. Rodgers, G.M., Fisher, J.W. and George, W.J.: Cyclic nucleotides and the splenic responses to erythropoietic stimulation. Pharmacologist 17(2): 269 (1975).

59. George, W.J., Busuttil, R.W. and Ignarro, L.J.: Reduction of myocardial cyclic GMP content as a possible mechanism for protection of the hypoxic heart by methylprednisolone. Pharmacologist 17(2):269 (1975).

60. White, L.A., Rodgers, G.M., Howley, P.S., Fisher, J.W. and George, W.J.: Cyclic GMP as a possible messenger for erythropoietin action in fetal liver culture. Pharmacologist 17(2):269 (1975).

61. Ignarro, L.J. and George, W.J.: Guanylate cyclase activity in purified human polymorphonuclear leukocytes. Pharmacologist 17(2):270 (1975).

62. Halpren-Ruder, D.H. and George, W.J.: Luteinizing hormone stimulation of acid nuclear protein phosphorylation in the porcine granulosa leuteal cell transformation. Clin. Res. 24:9 (1976).

63. Rodgers, G.M., Fink, G.D., Fisher, J.W. and George, W.J.: Renal cyclic AMP erythropoiesis and the auto-immune hemolytic anemia of New Zealand black mice. Clin. Res. 24:18 (1976).

64. White, L.A., Rodgers, G.M., Howley, P.S., Fisher, J.W. and George, W.J.: Cyclic GMP and erythroid cell response to erythropoietin in fetal rat liver culture. Clin. Res. 24:19 (1976).

65. Rodgers, G.M., Fisher, J.W. and George, W.J.: Cyclic nucleotides and the anemia of auto-immune renal disease. Texas Rept. Biol. Med. 4:25 (1976).

66. Graeff, R.M., von Rosenberg, C.S. and George, W.J.: Interaction between isoproteremol and acetylcholine on contractile force and cyclic nucleotide levels in the isolated perfused rat heart. Pharmacologist 18:222 (1976).

2021522338

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

67. Wicks, S.J., White, L.A. and George, W.J.: The interaction between cyclic AMP and cyclic GMP with respect to myocardial phosphodiesterase activity. Pharmacologist 18:222 (1976).

68. Sykes, A.R., Susuttil, R.W., Ammarell, R.L., Paddock, R.J., Howley, P.S. and George, W.J.: Protective effects of insulin and glucose on contractile force in the isolated hypoxic perfused rat heart. Pharmacologist 18: 248 (1976).

69. Paddock, R.J., Howley, P.S., Ammarell, R.L. and George, W.J.: Developmental changes in myocardial cyclic nucleotide content in neonatal rats. Pharmacologist 18:222 (1976).

70. White, L.A., Fisher, J.W., Howley, P.S. and George, W.J.: Cyclic nucleotide levels in synchronized rat fetal liver culture. Pharmacologist 18: 216 (1976).

71. Halpren-Ruder, D.H. and George, W.J.: Phosphorylation in the porcine follicular cell as a component of luteinizing hormone-induced follicular-luteal cell. Pharmacologist 18:221 (1976).

72. Sykes, A.R., Graeff, R.M. and George, W.J.: Effect of glucose, insulin, and potassium on contractile force in the hypoxic isolated perfused rat heart. Clin. Res. 25:8 (1977).

73. White, L.A., Howley, P.S., Fisher, J.W. and George, W.J.: A proposed role for cyclic GMP in initiation of mitosis. Clin. Res. 25:222 (1977).

74. Halpren-Ruder, D.H. and George, W.J.: Luteinizing hormone stimulated phosphorylation in porcine follicular cells. Clin. Res. 25:13 (1977).

75. Graeff, R.M. and George, W.J.: Effects of hypoxia on protein kinase activity in the isolated perfused rat heart. Adv. Cyclic Nucleotide Res. 9:1077 (1978).

76. Sykes, A.R., Graeff, R.M. and George, W.J.: Glucose, insulin and potassium: effects on cyclic nucleotides during myocardial hypoxia. Adv. Cyclic Nucleotide Res. 9:1077 (1978).

77. Von Rosenberg, C.S., Howley, P.S. and George, W.J.: Studies on the interactions between isoproterenol and acetylcholine on contractile force and cyclic nucleotide levels in the isolated perfused rat heart. Adv. Cyclic Nucleotide Res. 9:1077 (1978).

78. Halpren-Ruder, D.H. and George, W.J.: Cyclic AMP binding to subcellular fractions of luteinizing hormone-treated and control porcine granulosa cells. Adv. Cyclic Nucleotide Res. 9:1098 (1978).

79. White, L.A., Howley, P.S. and George, W.J.: Bidirectional oscillation of cyclic nucleotide levels during mitosis. Adv. Cyclic Nucleotide Res. 9: 1099 (1978).

2021522339

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ABSTRACTS (cont'd):

80. George, W.J., Busuttil, R.W., Kappelman, M.D. and Hewett, R.L.: Effects of cardiac cooling upon left ventricular cyclic nucleotide concentrations and myocardial recovery following ischemic arrest. Adv. Cyclic Nucleotide Res. 3:1099 (1973).

81. White, L.E. and George, W.J.: Possible role of cyclic GMP and cyclic AMP as mediators of action of erythropoietin. Clin. Res. 26:22A (1978).

82. George, W.J. and White, L.A.: Cyclic GMP and red blood cell proliferation in fetal rat liver. Proc. Intl. Union Pharmacol. 5:224 (1978).

83. George, W.J., White, L.A. and Jeter, J.R.: Role of cyclic nucleotides in the control of cellular proliferation. Proc. 7th Intl. Cell Cycle Conf. 7:4 (1978).

84. Graeff, R.M., White, L.A. and George, W.J.: Cyclic nucleotides and coronary flow in isolated perfused rat hearts. Pharmacologist 21:247 (1979).

85. White, L.A. and George, W.J.: Indirect effects of erythropoietin on cyclic nucleotide content in fetal liver cells. Pharmacologist 21:252 (1979).

86. White, L.A. and George, W.J.: The indirect effects of erythropoietin on cyclic nucleotide concentrations in erythroid cells. Proc. Intl. Soc. Exp. Hematol. 8:120 (1979).

87. Ryan, J.R., Garcia, A., McMahon, F.G., LaCorte, W. and George, W.J.: Utilization of intravenous maltose as a calorie source in normal human subjects. Clin. Pharmacol. Ther. 25(2):247, 1979.

88. White, L.A., Figueroa, E. and George, W.J.: Determination of cephalosporin antibiotics in serum employing high pressure liquid chromatography. Fed. Proc. 39:825 (1980).

89. Rincus, S.M., White, L.A., Francovitch, R. and George, W.J.: Evaluation of possible roles of cyclic GMP in mediating effects of erythropoietin. Fed. Proc. 39:765 (1980).

90. Kutob, D., Graeff, R.M., Degnan, J.N. and George, W.J.: Enhanced recovery of methylprednisolone and ibuprofen pretreated hearts following ischemia. Fed. Proc. 39:530 (1980).

91. Graeff, R.M. and George, W.J.: Effects of acetylcholine and brominated nucleotides on the isolated perfused rat heart. Fed. Proc. 39:742 (1980).

92. McMahon, F.G., George, W.J., Ryan, J.R., Klin, A. and LaCorte, W.: Cephalosporin-disulfiram (Antabuse) reactions. Am. Soc. Clin. Pharmacol. Ther. (1982).

2021522340

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd):

93. Francovitch, R.J., Raitano, L., Lee, T. and George, W.J.: Comparison of dermal and inhalation toxicities of volatile agents employing a dual function exposure chamber. FASEB 41:1568 (1982).

94. White, L.E., Daum, R., Willard, S. and George, W.J.: A high pressure liquid chromatographic (HPLC) method for the determination of the stability of rifampin in pharmaceutical preparations. FASEB 41:1582 (1982).

95. Francovitch, R.J., Schor, N. and George, W.J.: Effects of metabolism on ethylene dichlorice toxicity. Pharmacologist 25:103 (1983).

96. Woo, F.L., Johnson, A.P., Caldwell, D.R., Lertora, J.J.L. and George, W.J.: Piperacillin levels in human tears and aqueous humor. Pharmacologist 25:150 (1983).

97. Rege, A.B., Capistran, R.G. and George, W.J.: A rapid gas liquid chromatographic assay for plasma valproic acid. Pharmacologist 25:175 (1983).

98. McCloskey, S.E., White, L.A. and George, W.J.: Studies on the toxicity of benzyl alcohol. Pharmacologist 25:230 (1983).

99. McCloskey, S.E., Lertora, J.J.L., Gershanik, J.J. and George, W.J.: The effect of disulfiram on benzyl alcohol toxicity. Clin. Res. 31:852 (1984).

100. Pincus, S.M., Beckman, B.S. and George, W.J.: Effect of 12-O-tetradecanoyl-phorbol-13 acetate, a tumor promoter, on cyclic AMP levels in Friend erythroleukemic cells. Clin. Res. 31:855 (1984).

101. Subaiya, L., Rege, A., Weng, J.T., George, W.J. and Texidor, M.: The influence of isoflurane on plasma beta-endorphin immunoreactivity. Proc. Intl. Anesthesia Res. Soc. 58:3 (1984).

102. Pedigo, N.G., Anderson, M.B. and George, W.J.: Evaluation of cobalt toxicity on sperm development in mice. Proc. 9th Intl. Cong. Pharm. (1984).

103. Francovitch, R.J., Schor, N.A., and George, W.J.: Effect of alteration of cytochrome P450 activity in mice following inhalation exposure. Proc. of SOT (1985).

104. Pedigo, N.G., Anderson, M.B., and George, W.J.: Toxic effect of cobalt on male reproduction. Proc. of SOT (1985).

105. Johnson, A.P., Salisbury, C.R., Ensler, M.S., and George, W.J.: Systemic and Topical Gentamicin Penetration in Human Corneas. Proc. Amer. Acad. Ophthalmol. (1985).

106. Beckman, B., Pincus, S.M., Broadway, R.L., George, W.J. and Jeter, J.R., Jr.: Early changes in phosphorylation patterns in friend erythroleukemia cells. The Pharmacologist 27:142 (1985).

2021522341

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

ABSTRACTS (cont'd.):

107. Lertora, J.J.L., Smith, W.B., George, W.J., Rege, A.B., Solomito, J.A., Pinsky, W.W. and Weinstein, E.W.: Monitoring Amiodarone and Reverse T_3 Levels in Patients with Refractory Arrhythmias, Clinical Research 34:(1) 178A (1986).

108. Weiner, J.S., A.B. Rege, F.G. Boineau and W.J. George: Blood Level Monitoring of Cyclosporine in Kidney Transplant Patients. Clinical Research 34:(1) 179A (1986).

109. McCloskey, S.E., Lertora, J.J.L., Gershanik, J.L., White, L.A., Simoneaux, D. and George, W.J.: Toxicity of Benzyl Alcohol in Adult and Neonatal Mice. Clin. Research 34:(1) 197A (1986).

110. Anderson, M.B., Pedigo, N. and George, W.J.: Reproductive Effects of Chronic Oral Administration of Cobaltous Chloride. Proc. Soc. for the Study of Reproduction (1986).

111. Pedigo, N.G., Anderson, M.B., and George, W.J.: Effects of Chronic Administration of Cobaltous Chloride on Reproduction in Male mice. Proceedings of Society of Toxicology 35:42 (1986).

112. Francovitch, R.J., Siegel, P.D., George, C.J., Schor, N.A. and George, W.J. Toxicity of ethylene dichloride (EDC) following inhalation exposure. Proc. of Soc. Toxicol. 25:755 (1986).

113. McCloskey, S.E., Lertora, J.J.L., White, L.A., Simoneaux, D. and George, W.J. Toxicity and metabolism of benzyl alcohol. Proc. of Soc. Toxicol. 25:1037 (1986).

114. Nigro, D.A., Richard, M.B. Fleischhacker, D.S., Francovitch, R.J., White, L.E. and Geoge, W.J.: Effects of ethylene dichloride on lymphocyte blastogenesis. Proc. of Soc. of Toxicol. 25:15 (1986).

115. Preslan, J.E., Ensley, H.E., Jacobus, O.J. and George, W.J.: Enhanced extraction of organic contaminants from soils for GC/MS analyses using a methanol bridge and methylene chloride. Seventeenth Annual Symposium on Advances in Applied Analytical Chemistry. 17:26, (1987).

116. George, W.J., Siegel, P.D., Reynolds, C. and Bozelka, B.E.: Pulmonary biochemical parameters as indicators of NO_2 exposure and damage. The Pharmacologist 29(3):122, (1987).

117. Siegel, P.D., Reynolds, C., Bozelka, B.E. and George, W.J.: Murine pulmonary tissue response to acute and subacute NO_2 exposure. The Pharmacologist 29(3):155, (1987).

2021522342

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

TECHNICAL REPORTS:

1. George, W.J., and White, L.E.: Metabolism of Methylcyclopentadienyl Manganese tricarbonyl by Hepatic Microsomes. Ethyl Corporation, May 21, 1979.

2. George, W.J.: Evaluation of Proposed Discharges of Aluminum into New Orleans Area Water Supplies with Respect to Potential Effects on Renal Dialysis Patients. December 12, 1986.

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SPECIAL EVENTS

1. Invited speaker on Cyclic Nucleotides and Erythropoietin, American Society of Hematology, Hollywood, Florida, December, 1972.

2. Invited speaker at Annual Meeting of International Study Group for Cardiac Metabolism, Winnipeg, Canada, June 29, 1972.

3. Invited to participate in the Gordon Research Conference on Cyclic AMP, June 11-15, 1973, Tilton, New Hampshire.

4. Invited speaker for the 2nd International Symposium on Cyclic Nucleotide Research, Vancouver, British Columbia, July 8, 1973.

5. Invited speaker Recent Advances in Studies on Cardiac Metabolism, Quebec, Canada, June 20, 1974.

6. Invited speaker International Symposium on Pathophysiology, Prague, Czechoslovakia, July, 1975.

7. Chairman of Sessions at Meetings of the American Society of Pharmacology, 1973,1974,1975,1976,1977,1978,1979.

8. Chairman, Symposium on Cyclic Nucleotides, American Society of Pharmacology, New Orleans, Louisiana, August, 1976.

9. Invited to participate in Gordon Research Conference on Cyclic Nucleotides 1974,1975,1976,1977,1978.

10. Chairman, International Symposium on Cyclic Nucleotides, New Orleans, Louisiana, 1977.

11. Chairman, International Conference on Cyclic Nucleotide and Therapeutic Applications, Paris, France, 1978.

12. Invited speaker Symposium on Erythropoietin, Knoxville, Tennessee, October 6-8, 1980.

13. Chairman of Session Meetings of the American Society for Pharmacology and Experimental Therapeutics, 1983.

14. Co-chairman of Regional Meeting of the Society of Toxicology, New Orleans, Louisiana, June, 1984.

15. Invited Participant "Drug Program in Athletics" Annual Conference of the American College Health Association, New Orleans, Louisiana, 1986.

16. Invited Panelist "Drug Testing in the Workplace, Tulane University, New Orleans, Louisiana, 1986.

17. Invited Lecturer Oklahoma-Arkansas Medical Technologists Association. Little Rock, Arkansas, 1987.

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SPECIAL EVENTS (cont'd):

18. Invited Panelist - Louisiana Engineering Society, "Pharmacology & Society", New Orleans, LA, January, 1987.

19. Invited Speaker - Annual Conference for Ford Marketing Institute, New Orleans, LA, March, 1987

20. Invited Speaker - Effects of Hazardous Toxic Waste Disposal on Communities. Las Vegas, Nevada, September, 1987.

21. Invited Speaker - American College of Epidemiology, September, 1987.

22. Invited Speaker - Annual meeting of the American Hydrology Association, Atlanta, Georgia, October, 1987.

23. Invited Speaker - Pediatric Toxicology and American Acadmey of Pediatrics, San Francisco, CA, November, 1987

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VITAE

Dr. T. A. Loomis

PERSONAL DATA

REDACTED

ACADEMIC TRAINING AND GRADUATE DEGREES

B.S.	University of Washington (Pharmacy)	1939
M.S.	University of Buffalo (Pharmacology)	1941
Ph.D.	University of Buffalo (Pharmacology and Physiology)	1943
M.D.	Yale University, Medical School	1946

Internship - U.S. Public Health Service, Marine Hospital, Seattle, Washington 1947

License - State of Washington, Medicine and Surgery 1948

POSITIONS

Professor of Pharmacology and Toxicology - School of Medicine, University of Washington	1976-present
Research Affiliate - Regional Primate Center, University of Washington	1968-present
Professor of Pharmacology and State Toxicologist - School of Medicine, University of Washington	1957-1976
Associate Professor of Pharmacology and State Toxicologist - School of Medicine, University of Washington	1955-1957
Captain - U.S. Army Medical Corps (Active Duty)	1953-1955
Associate Professor - Department of Pharmacology, School of Medicine, University of Washington	1949-1953
Assistant Professor - Department of Pharmacology, School of Medicine, University of Washington	1947-1949
Medical Intern - U.S. Marine Hospital, Seattle, Washington	1946-1947
Fellow - Department of Pharmacology, Yale University	1944-1945
Laboratory Assistant - Department of Pharmacology, School of Medicine, Yale University	1943-1944
Research Fellow - Metabolic Research Unit, Department of Medicine, University of Buffalo and Buffalo General Hospital	1942-1943
Research Fellow - Department of Pharmacology, School of Medicine, University of Buffalo	1942-1943
Laboratory Assistant - Department of Pharmacology, School of Medicine, University of Buffalo	1941-1942
Laboratory Assistant - Department of Physiology, School of Medicine, University of Buffalo	1940-1941
Graduate Fellow - School of Pharmacy, University of Buffalo	1939-1940

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Dr. T. A. Loomis

SOCIETIES

COMMITTEES AND BOARDS

EPA Scientific Review Panel for Health Research, Member, 1980.
Committee Member, Sub-chronic Toxicity Test Protocols, E.P.A., 1979.
Pharmacology-Toxicology Section Chairman for Peer Review of NASA Life Sciences Proposals, American Institute Biological Sciences, 1978.
Editorial Board, Combustion Toxicology, Technomic Press, 1975-present.
Toxicology Education Award-Society of Toxicology and Forum for Advancement of Toxicology, 1976.
Advisory Board, Springer-Verlag Handbuch series, 1973-present.
U.S. Dept. Commerce, Committee Panelist, Marine Ecosystems Analysis, N.Y. Bight Project, 1976-1977.
National Academy of Science, Toxicology Information Center, Committee Member Chronic Toxicity Tests, 1976.
National Academy of Science, National Materials Advisory Board, Committee Member on Health Hazards of Pyrolysis Products of Polymers, 1973-1978.
National Institute Occupational Safety & Health Review Consultant (Formaldehyde) 1976.
National Institute Occupational Safety & Health Review Consultant (Phenol) 1975.
Advisory Committee to Review the Use of 2,4,5,-T, Agricultural Research Service, U.S. Department of Agriculture, 1970-1973.
Committee for Identification of Research Needs in Water, Environmental Health Service, Public Health Service, Department of Health, Education and Welfare, 1970.
Pharmacology-Toxicology Training Committee, National Institute of General Medical Sciences, National Institutes of Health, 1970-1974.
President - Western Pharmacology Society, 1969-1970.
President - Society of Toxicology, 1969-1970.
Pharmacology-Toxicology Review Committee, National Institute of General Medical Sciences, National Institutes of Health, 1966-1970.
Advisory Committee, Pesticides Regulation Division, U.S. Department of Agriculture, 1966-1970.
Advisory Committee on Protocol for Safety Evaluation, Food and Drug Administration, 1966-1969.
Agricultural Advisory Board on Pesticides and Insecticides, State of Washington, 1963-1979.
Editorial Board - Clinical Pharmacology and Therapeutics, 1960-present.
Diplomate, National Board Medical Examiners.
National Safety Council Committee on Tests for Intoxication, 1951-present.

2021522348

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T. A. Loomis

Fiero, G. W. and T. A. Loomis, "Hydrogenated Oil as an Ointment Base; 4 Antiseptic Ointments," J. Amer. pharm. Ass., 29: 458-459 (1940).

Loomis, T. A. and E. Neter, "The Combined Bacteriostatic Action of Sulfonamide Compounds and Pyridium upon B. coli in vitro," Urologic and Cutaneous Review, 45: 2-4 (1941).

Loomis, T. A., R. S. Hubbard and E. Neter, "Inhibition of the Bacteriostatic Action of Sulfanilamide by Yeast Extracts," Proc. Soc. exp. Biol., N.Y., 47: 159-163 (1941).

Hubbard, R. S. and T. A. Loomis, "The Determination of Inulin," J. Biol. Chem., 145: 641-645 (1942).

Emry, F. E. and T. A. Loomis, "A Method of Obtaining Records of the Tortoise Sinus with Data on Extra Systoles and Length of Cycles Following Stimulation," J. Lab. Clin. Med., 28: 889-896 (1943).

Loomis, T. A., R. S. Hubbard and G. F. Koepf, "The Excretion of Sulfanilamide and Acetylsulfanilamide by the Kidney of the Rabbit," Amer. J. Physiol., 139: 197-201 (1943).

Loomis, T. A., G. F. Koepf and R. S. Hubbard, "The Excretion of Sulfanilamide and Acetylsulfanilamide by the Human Kidney," Amer. J. Physiol., 141: 158-163 (1944).

Koepf, G. F., R. S. Hubbard and T. A. Loomis, "The Relative Constancy of Inulin and Diodrast Clearances," J. Clin. Invest., 23: 946 (1944).

Drill, V. A. and T. A. Loomis, "Effects of Mapharsen on Bromsulphalein Retention in Normal Dogs," Proc. Soc. exp. Biol., N.Y., 58: 296-298 (1945).

Krop, S. and T. A. Loomis, "A Simple Water Manometer for Recording Intestinal Activity," Science, 102: 155-156 (1945).

Drill, V. A. and T. A. Loomis, "Effect of Methionine Supplements on Hepatic Injury Produced by Carbon Tetrachloride," Science, 103: 199-201 (1946).

Schaffer, N. K. and T. A. Loomis, "Pharmacological Activity of Basic Alkyl Esters of Substituted Pyrrolidine Dicarboxylic Acids: 1. Local Anesthetic Activity and Toxicity," Yale J. Biol. Med., 18: 157-164 (1946).

Loomis, T. A. and N. K. Schaffer, "Pharmacological Activity of Basic Alkyl Esters of Substituted Pyrrolidine Dicarboxylic Acids: 2. Action on Intestine, Uterus and Blood Pressure," Yale J. Biol. Med., 18: 171-184 (1946).

2021522349

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

T. A. Loomis

Loomis, T. A. and R. Spielmeyer, "Local Anesthetic Activity and Toxicity of Di-(β-diethylaminoethyl) ester of 1-benzyl 2,5-dicarboxy pyrrolidine," Yale J. Biol. Med., 18: 165-169 (1946).

Drill, V. A. and T. A. Loomis, "Functional and Fatty Changes in Liver During Chronic Vitamin B Complex Deficiency," Proc. Soc. exp. Biol., N.Y., 61: 374-376 (1946).

Griffith, F. R., Jr., Akira Omachi, J. E. Lockwood and T. A. Loomis, "The Effect of Intravenous Adrenalin on Blood Flow, Sugar Retention, Lactate Ouput and Respiratory Metabolism of Peripheral (Leg) Tissues in the Anesthetized Cat," Amer. J. Physiol., 149: 64-76 (1947).

Drill, V. A. and T. A. Loomis, "Methionine Therapy in Experimental Liver Injury Produced by Carbon Tetrachloride," J. Pharmacol., 90: 138-149 (1947).

Drill, V. A., T. A. Loomis and Julius Belford, "Effect of Protein and Carbohydrate Intake on Liver Injury Produced in Dogs by Carbon Tetrachloride," J. Indust. Hyg., 29: 180-184 (1947).

Drill, V. A. and T. A. Loomis, "Production of Functional and Fatty Changes in the Liver by Chronic Vitamin B Deficiency, and Interralationships with Protein Intake," J. Nutr., 35: 333-349 (1948).

Loomis, T. A., "Response of the Duodenum to Morphine," Proc. Soc. exp. Biol., N.Y., 69: 146-150 (1948).

Loomis, T. A., "Antithrombin and Heparin in Human Blood," J. Lab. Clin. Med., 34: 631-636 (1949).

Loomis, T. A., "Activation and Action of the Fibrinolytic Human Blood Plasma Fractions," J. Lab. Clin. Med., 36: 82-86 (1950).

Farah, A. and T. A. Loomis, "The Action of Cardiac Glycosides on Experimental Auricular Flutter," Circulation, 2: 742-748 (1950).

Loomis, T. A., "A Study of the Rate of Metabolism of Ethyl Alcohol," Quart. J. Studies Alchohol, 11: 527-537 (1950).

Loomis, T. A. and R. Beyer, "An Apparatus for the Continuous and Simultaneous Measurement of Carbon Dioxide and Nitrous Oxide in Respired Air," Anesthesiology, 12: 173-180 (1951).

Smith, J. W. and T. A. Loomis, "The Potentiating Effect of Alcohol on Thiopental Induced Sleep," Proc. Soc. exp. Biol, N.Y., 78: 827-829 (1951).

Loomis, T. A., J. E. Jesseph and R. E. Beyer, "Prolongation of the Anticoagulant Action of Heparin with Procaine and Butacaine Conjugates," J. Pharmacol., 104: 87-92 (1952).

2021522350

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

T. A. Loomis

Ransom, V. R. and T. Loomis, "The Effect of Ouabain on the Respiration of Isometrically Contracting Rat Auricle." J. Pharmacol., 104: 219-223 (1952).

Fink, L. D. and T. A. Loomis, "Effect of Dihydroergotamine on Epinephrine Response in the Hind-Limb of Dogs," Proc. Soc. exp. Biol., N.Y., 80: 481-483 (1952).

Loomis, T. A. and J. E. Jesseph, " A Clinical Study of Prolonged Anti-coagulant Effect with Repository Butacaine Heparin," J. Pharmacol. 106: 83-87 (1952).

Loomis, T. A., "Effect of Alcohol on Myocardial and Respiratory Function: The Influence of Modified Respiratory Function on the Cardiac Toxicity of Alcohol," Quart. J. Studies Alcohol, 13: 561-570 (1952).

West, T. C., D. M. Jones and T. A. Loomis, "Effect of Ovarian Hormones on Contractile Energy of Rat Uterus," Amer. J. Physiol., 172: 541-546 (1953).

Loomis, T. A. and R. E. Beyer, "Heparin-Like Anticoagulant Action of Sulfonated Lignins from Commercial Waste Sulfite Liquor," J. Pharmacol., 109: 21-25 (1953).

West, T. C., L. D. Turner and T. A. Loomis, "Effects of Acetylcholine on Mechanical and Electrical Properties of Isolated Rabbit Auricle: Their Relationship to the Genesis of Arrhythmias," J. Pharmacol., 111: 475-482 (1954).

Horita, A. and T. A. Loomis, "The Influence of Anticoagulants on the Formation and Regression of Experimental Atherosclerosis," J. exp. Med., 100: 381-390 (1954).

Loomis, T. A. and S. Krop, "The Influence of Sarin on Respiratory Effort and Pulmonary Ventilation," Medical Laboratories Research Report No. 352 (1955).

Loomis, T. A. and S. Krop, "Cabin Air Contamination in KB-57A Aircraft," Medical Laboratories Special Report No. 61 (1955).

Loomis, T. A. and S. Krop, "Auricular Fibrillation Induced and Maintained in Animals by Acetylcholine or Vagal Stimulation," Circulation, 3: 390-396 (1955).

Loomis, T. A., "A Broncho-Constrictor Agent in Cigarette Smoke," Proc. Soc. exp. Biol., N.Y., 92: 337-340 (1956).

Loomis, T. A., "The Effect of an Aldoxime on Acute Sarin Poisoning," J. Pharmacol., 118: 123-128 (1956).

Loomis, T. A., "Potentiation of Heparin Anticoagulant Action with Sulfonated Lignin," Fed. Proc., 15: 452 (1956).

2021522351

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

T. A. Loomis

Krop, S. and T. A. Loomis, "Treatment of Anticholinesterase Poisoning by Phosphate Insecticides and 'Nerve Gas'," N.Y. State J. Med., 56: 1766-1768 (1956).

Loomis, T. A., "General Toxicology," Proc. Natl. Assn. Coroners, pp. 22-27 (1956).

West, T. C. and T. A. Loomis, "Rationalizing the Problem of Acute Poisoning," Clin. Med., 3: 641-644 (1956).

Loomis, T. A., J. E. Fox and C. S. Spacth, "Identification of Barbiturates for Forensic Medical Purposes by Use of X-ray Diffraction," Fed. Proc., 16: 318 (1957).

Loomis, T. A., "The Choice of Drugs Affecting the Coagulation of Blood," In Drugs of Choice 1958-1959, ed. Walter Modell, pp. 727-742, C. V. Mosby: St. Louis (1958).

Loomis, T. A., "Anticoagulant and Coagulant Drugs," In Pharmacology in Medicine, ed. V. A. Drill, pp. 748-761, McGraw Hill: New York (1958).

Fox, James E. and T. A. Loomis, "Gas Chromatographic Analysis of Alcohol and Certain Other Volatiles in Biological Material for Forensic Purposes," Proc. Soc. exp. Biol, N.Y., 97: 236-237 (1958).

Loomis, T. A. and T. C. West, "The Influence of Alcohol on Automobile Driving Ability, An Experimental Study for Evaluation of Certain Medicolegal Aspects," Quart. J. Studies Alcohol, 19: 30-46 (1953).

Loomis, T. A. and T. C. West, "Comparative Sedative Effects of a Barbiturate and Some Tranquilizer Drugs on Normal Subjects," J. Pharmacol., 122: 525-531 (1958).

Loomis, T. A., "A Clinical Study of the Rate of Absorption of Propriatary Acetylsalicylic Acid Formulations Follwoing Oral Administration," Federal Trade Commission Report (1959).

Loomis, T. A., "Failure of Liver to Inactivate Heparin," Proc. Soc. exp. Biol., N.Y., 101: 444-447 (1959).

Loomis, T. A., "Absorption of Heparin from the Intestine," Proc. Soc. exp. Biol., N.Y., 101: 447-449 (1959).

Loomis, T. A., "Absorption of Aspirin C^{14} from the Stomach," Federal Trade Commission Report (1960).

Loomis, T. A. and B. Salafsky, "Intestinal Absorption of a Modified Heparin," Proc. Soc. exp. Biol., N.Y., 104: 62-65 (1960).

Loomis, T. A. and T. C. West, "Two Experiments on Psychoactive Drugs using a Simulated Auto-driving Device," In Drugs and Behavior, eds. L. Uhr and J. G. Miller, pp. 332-334, Wiley & Sons: New York (1960).

2021522352

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Loomis, T. A., "The Choice of Drugs Affecting the Coagulation of Blood," In Drugs of Choice 1960-1961, ed. Walter Modell, pp. 649-661, C. V. Mosby: St. Louis (1960).

Loomis, T. A., "Distribution and Excretion of Heparin," Proc. Soc. exp. Biol., N.Y., 106: 490-492 (1961).

Loomis, T. A. and B. Salafsky, "Potentiation of Striated Muscle Contraction by Piperidlymethylandrostane," Proc. Soc. exp. Biol., N.Y., 111: 667-670 (1962).

Loomis, T. A., "Effects of Alcohol on Persons Using Tranquilizers." Transactions of Third International Conference on Alcohol and Road Traffic, London British Medical Association, p. 20 (1962).

Loomis, T. A., "Potentiation of Neuromuscular Transmission," Proc. Western Pharmacol. Soc., 5: 34 (1962).

Loomis, T. A., "Drugs Affecting the Coagulation of Blood," In Drugs of Choice 1962-1963, ed. Walter Modell, pp. 634-647, C. V. Mosby: St. Louis (1962).

Loomis, T. A., "Neuromuscular Effects of Piperidlymethyl-androstande-diol," Arch. int. Pharmacodyn., 141: 412-422 (1963).

Quinby, G. E., T. A. Loomis and H. Brown, "Oral Occupational Parathion Poisoning Treated with 2-PAM Iodide (2-Pyridine Aldoxime Methiodide)," New Engl. J. Med., 268: 639-643 (1963).

Loomis, T. A. and B. Salafsky, "Paper Electrophoresis of Fibrinogen and its Products," Thrombosis Et Diathesis Haemorrhagica, 9: 155-163 (1963).

Loomis, T. A., "Distribution and Excretion of Pyridine-2-Aldoxime Methiodide (PAM); Atropine and PAM in Sarin Poisoning," Tox. appl. Pharmacol., 5: 489-499 (1963).

Loomis, T. A., M. J. Welsh, Jr. and G. T. Miller, "A Comparative Study of Some Pyridinium Oximes as Reactivators of Phosphorylated Acetylcholinesterase and as Antidotes in Sarin Poisoning," Tox. appl. Pharmacol., 5: 588-598 (1963).

Loomis, T. A. and B. Salafsky, "Antidotal Action of Pyridinium Oximes in Anticholinesterase Poisoning; Comparative Effects of Soman, Sarin, and Neostigmine on Neuromuscular Function," Tox. appl. Pharmacol., 5: 685-701 (1963).

Loomis, T. A., "Drugs Affecting the Coagulation of Blood," In Drugs of Choice 1964-1965, ed. Walter Modell, pp. 687-700, D.V. Mosby: St. Louis (1964).

2021522353

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Loomis, T. A. and B. Salafsky, "Some Effects of Soman on Neuromuscular Function and on Acetylcholinesterase in the Rat," J. Pharmacol., 144: 301-309 (1964).

Salafsky, B. and T. A. Loomis, "The Effect of Heparin, Heparinoids, and other Electronegative Compounds on the in vitro Thrombin-Fibrinogen Conversion and on Whole Blood Clotting Time," Arch. int. Pharmacodyn., 150: 107-117 (1964).

Loomis, T. A., "Anticoagulant and Coagulant Drugs," In Drill's Pharmacology in Medicine, ed. Joseph R. DiPalma, pp. 832-843, McGraw Hill: New York, (1965).

Johnson, D. D. and T. A. Loomis, "Changes in Velocity of Muscle Shortening During Post-Tetanic Potentiation and During PMA-Induced Twith Potentiation of the Rat Anterior Tibial Muscle," Life Sci., 4: 2309-2314 (1965).

Loomis, T. A. and D. D. Johnson, "Reversal of a Soman-Induced Effect on Neuromuscular Function without Reactivation of Cholinesterase," Tox. appl. Pharmacol., 8: 528-532 (1966).

Loomis, T. A. and D. D. Johnson, "Aging and Reversal of Soman-Induced Effects on Neuromuscular Function with Oximes in the Presence of Dimethyl Sulfoxide;" Tox. appl. Pharmacol., 8: 533-539 (1966).

Loomis, T. A., "Reversal of a Soman-Induced Effect on Neuromuscular Function by Oximes," Life Sci., 5: 1255-1261 (1966).

Loomis, T. A., "Pharmacology of Alcoholism," Western Medicine 7: Supplement 3, 5-7 (1966).

Loomis, T. A. and A. C. Konker, "Effects of an Organic Phosphate on the Response of Denervated Muscle to Acetylcholine and Some Neuromuscular Blocking Agents," Arch. int. Pharmacodyn., 165: 308-318 (1967).

Loomis, T. A., "Neuromuscular Function in the Absence of Cholinesterase," Arch. int. Pharmacodyn. 165: 319-327 (1967).

Johnson, D. D., and T. A. Loomis, "Organophosphate Induced Post-Tetanic Depression of the Twitch Reponse," Arch. int. Pharmacodyn., 167: 227-236 (1967).

Loomis, T. A., "Drug Metabolism." Proceedings of the Fourth International Congress on Pharmacology, Vol. 1, pp. 142-145 (1969).

Loomis, T. A., "Symposium on the Evaluation of the Safety of Food Additives and Chemical Residues: Introduction," Tox. Appl. Pharmacol., 16:495-497 (1970).

2021522354

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Loomis, T. A., and 1969-1970 Council, Society of Toxicology, "Constructive Criticism -- A Tool for Influencing Some National Problems in Toxicology,: Tox. appl. Pharmacology, 1972, Vol. 2. (Karger, Basel, 1973).

Loomis, T. A., Editor of Voume 2, Toxicological Problems, Fifth International Congress on Pharmacology, (Karger, Basel, 1973).

Loomis, T. A.; Sommer, H. Z.; Collins, J. A., "Lethalities, Antiesterase and Hemicholium-like Actions of Series of Bis-Quarternary Ammonium Compounds," Toxicology and Applied Pharmacology, 27: 666, (1974).

Loomis, T. A.; Blase, B.W.; Collins, J. A.; and Sommer, H. Z., "Two Active Structures for Hemicholinium-Like Action,: Toxicology and Applied Pharmacology, 27: 676 (1974).

Loomis, T. A., "Blood Alcohol in Automobile Drivers: Measurement and Interpretation for Medico-Legal Purposes." Quarterly Journal of Studies on Alcohol, 35: 353, (1974).

Loomis, T. A., "Acute and Prolonged Toxicity Tests," Journal of the Association of Official Analytical Chemists, 58: 4; 645-549, (1975).

Gallaher, E. J. and Loomis, T. A., "Metabolism of Ethyl Acetate in the Rat: Hydrolysis to Ethyl Alcohol In Vitro and In Vivo", Tox. and Appl. Pharmacology, 34: 309-313, (1975).

Loomis, T. A., The Role of the University in the Training of Toxicologists, Proceedings European Society of Toxicology, Vol. XVII pp. 144-149, Exerptu Medica, Amsterdam, (1975).

Blase, Barrie, W. and Loomis, T. A., Uptake and Metabolism of Carbaryl by Isolated Perfused Rabbit Lung, Tox. and Apple. Pharmacol., 37: 481-490 (1976).

Predmore, D. B., Christian, G. D., and T. A. Loomis, Recovery of Morphine from Biological Samples by Hydrolysis and Solvent Extraction, Jr. Forensic Sciences, 23: 481-489, (1978).

Arthaud, L. E., and T. A. Loomis, Methoxyflurane-Induced Nephrotoxicity, Tox. and Appl. Pharmacol. (In Press) (1978).

Reinhart, C. and T. A. Loomis (Eds.) Fire Saftey Aspects of Polymeric Materials Volume 3, Smoke and Toxicity, Nat'l Acad. Sciences, Technomic Press, (1978).

Gallaher, E. J. and T. A. Loomis, The Rapid onset of Ethanol Tolerance in Wistor Rats Following Intensive Practice on the Moving Belt Task. Tox. and Appl. Pharmacol., 48: 415-424, (1979).

2021522355

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Loomis, T.A., "Formaldehyde Toxicity": Arch. Pathology and Lab. Med., 103:321-324, (1979).

Loomis, T.A., "Cutaneous Toxicity Symposium, Skin as a Portal of Entry for Systemic Effects": In Current Concepts in Cutaneous Toxicity, Academic Press, pp. 153-169, (1980).

Loomis, T.A., "Chlorinated Dibenzodioxins in Human Milk and Their Toxicologic Significance": Tox. and Appl. Pharmacol. In press, (1980).

Loomis, T.A., "The Pharmacology of Alcohol in Alcoholism, Development, Consequences and Interventions, 2nd Edition. Estes, N.J., and Heineman, M.E. (Eds.). St. Louis, C. V. Mosby, pp. 93-101, (1982).

Textbooks:

Essentials of Toxicology, by. T. A. Loomis
Lea and Febiger Publishers, 1968.

Essentials of Toxicology, by T.A. Loomis (2nd Edition)
Lea and Febiger Publishers, 1974.

Essentials of Toxicology, by T.A. Loomis (3rd Edition)
Lea and Febiger Publishers, 1978.

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R: REDACTED MATERIAL

CURRICULUM VITAE

NAME: Robert Alfred Squire

DATE AND PLACE OF BIRTH: REDACTED

CITIZENSHIP: United States

MARITAL STATUS: REDACTED

EDUCATION:
June, 1948 - graduated from high school
June, 1952 - B.S. University of Vermont
June, 1956 - D.V.M., Cornell University
June, 1964 - Ph.D., Cornell University

BOARD CERTIFICATION: 1965, Diplomate, American College of Veterinary Pathologists

CHRONOLOGY OF EMPLOYMENT

1984 - date	Professor of Comparative Medicine, The Johns Hopkins University School of Medicine, Baltimore, Maryland.
1982 - date	Adjunct Professor of Pathology, University of Maryland School of Medicine, Baltimore, Maryland.
1980 - date	President, Robert A. Squire Associates, Inc., Ruxton, Maryland.
1976 - 1977	Director, Carcinogenesis Bioassay Program, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Maryland.
1976 - 1977	CHief, Carcinogen Bioassay and Program Resources Branch, Carcinogenesis Program, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Maryland.
1974 - 1976	Associate Chief, Experimental Pathology Branch, Carcinogenesis Program, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Maryland.
1973 - 1976	Head, Tumor Pathology Section, Carcinogenesis Program, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Maryland.

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CHRONOLOGY OF EMPLOYMENT CONT'D.

1973 - 1976	Expert Consultant, Carcinogenesis Program, Division of Cancer Cause and Prevention, National Cancer Institute, Bethesda, Maryland.
1970 - 1975	Associate Professor of Pathobiology, The Johns Hopkins University, School of Hygiene and Public Health, Baltimore, Maryland.
1968 - 1984	Associate Professor of Comparative Medicine, Associate Professor of Pathology, The Johns Hopkins University School of Medicine, Baltimore, Maryland.
1968 - 1973	Director, Laboratory Animal and Comparative Pathology Training Program (USPHS-NIH), The Johns Hopkins University, School of Medicine, Baltimore, Maryland.
1966 - 1973	Head, Comparative Pathology Program, The Johns Hopkins University School of Medicine, Baltimore, Maryland.
1966 - 1973	Pathologist, Baltimore Zoo, Baltimore, Maryland.
1965 - 1973	Director, Animal Tumor Clinic, The Johns Hopkins University School of Medicine, Baltimore, Maryland.
1964 - 1968	Assistant Professor of Pathology, and Assistant Professor of Animal Medicine, The Johns Hopkins University School of Medicine, Baltimore, Maryland.
1962 - 1964	USPHS-NIH Postdoctoral Fellow, Cornell University, Ithaca, N.Y.
1961 - 1962	Instructor in Pathology, Cornell University, Ithaca, N.Y.
1956 - 1960	Private Veterinary Practice, Fair Haven Animal Hospital, Fair Haven, Vermont.

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CURRICULUM VITAE CONT'D.
Robert Alfred Squire

SOCIETIES

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SCIENTIFIC AND ADVISORY COMMITTEES

1965	Special Task Force, Joint Committee on Veterinary Education, The American Veterinary Medical Association Washington, D.C.
1968 -1972	Chairman, Committee on Laboratory Animal Diseases, Institute of Laboratory Animal Resources, National Academy of Science, Washington, D.C.
1968 - 1978	Member, Advisory Committee to Registry of Comparative Pathology, Armed Forces Institute of Pathology (Universities Associated for Research and Education in Pathology), Washington, D.C.
1971 - 1972	Chairman, Statutory Advisory Committee, Food and Drug Administration, Washington, D.C.
1971 - 1974	Member, Scientific Advisory Council, Morris Animal Foundation, Denver, CO.
1971 - 1975	Chairman, Advisory Council, New York State Veterinary College, Cornell University, Ithaca, N.Y.
1971 - 1973	Chairman, Medical Committee, Baltimore, Zoological Society.
1971 - 1978	Board of Trustees, Baltimore Zoological Society.
1974	Panel Member, National Cancer Program's Planning Conference, Washington, D.C.
1975 - 1976	Member, Advisory Council, New York State Veterinary College, Cornell University, Ithaca, N.Y.

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SCIENTIFIC AND ADVISORY COMMITTEES CONT'D.

1975 - 1978	Member, Toxicology Advisory Committee, Food and Drug Administration, Washington, D.C.
1975 - 1976	Leader, Pathology Working Group, Committee for the Review of Data on Carcinogenicity of Cyclamates, convened by the National Cancer Institute for the Food and Drug Administration.
1976 - 1982	Consultant, Cancer Assessment Group, Environmental Protection Agency, Washington, D.C.
1976 - 1982	Member, Committee on Histologic Classification of Laboratory Animal Tumors, Institute of Laboratory Animal Resources, National Research Council, National Academy of Science, Washington, D.C.
1977 - date	Member, Scientific Advisory Board, Charles River Breeding Laboratories, Wilmington, Mass.
1977 - 1982	Chairman, Committee on Histologic Classification of Laboratory Animal Tumors, Institute of Laboratory Animal Resources, National Research Council, National Academy of Science, Washington, D.C.
1977 - 1978	Consultant, Carcinogenesis Program, National Cancer Institute, Bethesda, Maryland.
1977 - 1980	Member, Science Advisory Board, National Center for Toxicological Research, Jefferson, Arkansas.
1977 - 1982	Member, Scientific Committee, Food Safety Council, Washington, D.C.
1978 - 1984	Member, Advisory Council, New York State College of Veterinary Member, Cornell University, Ithaca, N.Y.
1978 - 1986	Director, Toxicology Forum, Washington, D.C.
1979 - 1988	Director-at-Large, Universities Associated for Research and Education in Pathology, Bethesda, Maryland.

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SCIENTIFIC AND ADVISORY COMMITTEES CONT'D.

1980 - 1982	Chairman, The Nutrition Foundation Expert Committee on the Safety of Lead and Lead Salts in Food, Washington, D.C.
1980 - 1986	Member, Advisory Committee to Registry of Environmental Pathology, International Academy of Pathology, AFIP, Washington, D.C.
1980 - date	Member, Expert Committee on Pathology and Toxicology, International Life Sciences Institute, Washington, D.C.
1980 - date	Member, Regulatory Liaison Committee, American College of Veterinary Pathologists.
1982 - 1984	Member, Committee on Chemical Environmental Mutagens, Board on Toxicology and Environmental Health Hazards, National Academy of Sciences, Washington, D.C.
1982 - 1983	Member, The Nutrition Foundation International Expert Advisory Group on the Relevance of Mouse Hepatoma to Human Carcinogenic Risk, Washington, D.C.
1982 - 1983	Member, Four Nation Committee on the Evaluation of the Safety of BHA, Food and Drug Administration, Washington, D.C.
1983 - 1984	Member, American Industrial Health Council Committee on General Criteria for Assessing the Evidence for Carcinogenicity of Chemical Substances, Washington, D.C.
1983 - 1984	Member, Panel of Experts, Rat Liver Tumor Workshop, National Toxicology Program, Research Triangle Park, North Carolina.
1986 - 1987	Councilor, Carcinogenesis Specialty Section, Society of Toxicology.
1986 - 1987	Member, Expert Panel, Carcinogenicity of 2,4-D, Ontario Ministry of the Environment, Ontario, Canada.
1987 - date	Consultant, Science Advisory Board, Environmental Protection Agency, Washington, D.C.

2021522362

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BIBLIOGRAPHY

Robert A. Squire, D.V.M., Ph.D.

Squire, R.A.: Eperythrozoonosis in Swine. N.Y. State Vet. Med. Bull., 1: 28, 1957.

Roberts, S.J., Squire, R.A., and Gilman, H.: Deaths in Two Claves Following Vaccination with Brucella Abortus Strain 19 Vaccine. Cornell Vet. 52: 592-595.

Carmichael, L.E., Fabricant, J., and Squire, R.A.: A Fatal Septicemic Disease of Infant Puppies Caused by Cytopathogenic Organisms with Characteristics of Mycoplasma. Vet. Rec. 117: 826833, 1964.

Squire, R.A.: Hematopoietic Tumors of Domestic Animals. Cornell Vet. 54: 97-150, 1964.

Carmichael, L.E., Squire, R.A. and Krook, L.: Clinical and Pathologic Features of a Fatal Viral Disease of Newborn Pups. Am. J. Vet. Res., 26: 803-814, 1965.

Squire, R.A.: Malignant Lymphoma in Dogs. In: Kirk, R.W. (ed.): Current Veterinary Therapy (edition 2). Philadelphia, W.B. Saunders Co., pp. 249-254, 1965.

Squire, R.A.: A Cytologic Study of Malignant Lymphoma in Cattle, Dogs, and Cats. Am. J. Vet. Res. 26: 97-107, 1965.

Squire, R.A.: Feline lymphoma: A Comparison with the Burkett Tumor of Children. Cancer 19: 447-453, 1966.

Eldadah, A.H., Nathanson, N., Smith, K.O., Squire R.A., Santos, G.W., and Melby E.C., Jr.: Viral Hemorrhagic Encephalopathy of Rats. Science, 156: 392, 1967.

Fleischman, R.W., Squire, R.A., Sladen, W.J.L., and Moore, J.: Pathologic Confirmation of Malaria (Plasomodium Elongatum) in Captive African Penguins (Sphenicus demersus). Bull. Wildlife Dis. Assoc. 4: 133:135, 1986.

Squire, R.A. and Melby, E.C., Jr.: Naturally Occurring Canine and Feline Lymphomas as Biomedical Models. In: Animal Models for Biomedical Research. National Academy of Sciences Publication No. 1594. Washington, D.C., National Academy of Sciences, 1968, pp. 3-12.

Squire, R.A. and Melby, E.C., Jr.: Malignant Lymphoma in Dogs. In: Dirk, R.W. (Ed.): Current Veterinary Therapy (edition 3). Philadelphia, W.B. Saunders Co., 1968, pp. 249-254.

2021522363

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Squire, R.A.: Equine Infectious Anemia: A Model of Immunoproliferative Disease. Blood 32; 175-169, 1968.

Fleischman, R.W., Squire, R.A., Sladen, W.J.L., and Melby, E.C., Jr.: Malaria (Plasmodium elongatum) in Captive African Penguins (Spenicus demersus). J. Am. Vet. Assoc. 153:928-935, 1968.

Squire, R.A.: Spontaneous Hematopoietic Tumors in Dogs. In Lingeman, C.H. and Garner, F.M. (eds.): Comparative Morphology of Hematopoietic Neoplasms. National Cancer Institute Monograph No.32. Washington, D.C., U.S. Govt. Print. Off., 1969, pp. 256-301.

Squire, R.A.: Non-neoplastic Hyperplasia of Lymph Nodes of Animals. In: Lingeman, C.H. and Garner, F.M. (eds.): Comparative Morphology of Hematopoietic Neoplasms. National Cancer Institute Monograph No. 32. Washington, D.C., U.S. Govt. Print. Off., 1969, pp. 256-266.

Squire, R.A.: Burkitt's Lymphoma - A Comparative Study. In: Lingeman, C.H. and Garner, F.M. (eds.): Comparative Morphology of Hematopoietic Neoplasms. National Cancer Institute Monograph No. 32. Washington, D.C., U.S. Govt. Print. Off., 1969, pp. 271-301.

Squire, R.A.: Comparative Aspects of Hematopoietic Neoplasms of Animal and Man - Summary. In: Lingeman, C.H. and Garner, F.M. (eds.): Comparative Morphology of Hematopoietic Neoplasms. National Cancer Institute Mongraphy No. 32. Washington, D.C., U.S. Govt. Print Off., 1969, pp. 363-365.

Squire, R.A., Montali, R.J., and Bush, M.: Pathogenetic Aspects of Equine Infectious Anemia. J. Am. Vet. Med. Assoc. 155: 355-358, 1969.

Fleischman, R.W. and Squire, R.A.: Verminous Pneumonia in California Sea Lions. Vet. Pathol. 7: 89-101, 1970.

Nathanson, N., Cole, G.A., ElDadah, A.H. Santos, G.W., Squire, R.A., and Smith, K.O.: Viral Hemorrhagic Encephalopathy of Rats. Am. J. Epidemiol. 91: 328-338, 1970.

Altman, N.H., Street, C.S., Whitmore, R.G., Turner, J.Y. and Squire, R.A.: Primary Pulmonary Epidermoid Tumors in Goats. Cancer. 26: 727-732, 1970.

2021522364

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Skinner, D.C., Newman, M.H., and Squire, R.A.: Preservation and Transplantation of Organs Maintained by Ventricular Assistance. J. Surg. Res. 10: 253-264, 1970.

Montali, R.J., Strandberg, J.D., and Squire, R.A.: A Histochemical and Ultrastructural Study of Intimal Bodies of Horse Arterioles. Lab. Invest. 23: 302-306, 1970.

Altman, N.H. and Squire, R.A.: Diagnosis of Canine Lymphoma. J. Am. Vet. Med. Assoc. 157: 1676-1680, 1970.

National Research Council, ILAR, Committee on Laboratory Animal Diseases, Squire, R.A. (Chairman): A Guide to Infectious Diseases of Mice and Rats. 1971.

Squire, R.A. and Bush, M.: Malignant Lymphoma in Dogs. In: Kirk, R.W. (ed.): Current Veterinary Therapy (edition 4). Philadelphia, W.B. Saunders Co., 1971, pp. 271-276.

Squire, R.A. and Bush, M.: Comments on Treatment of Leukemia in the Cat. J. Am. Vet. Med. Assoc. 158: 1134-1136, 1971.

Altman, N.H., Melby, E.C., Jr., and Squire, R.A.: Intraerythrocytic Crystalloid Bodies in Cats. Blood 39: 801-803, 1972.

Squire, R.A.: Zoos and Universities Join Forces for Biomedical Research - Johns Hopkins, Baltimore Zoo Collaborate. Comp. Pathol. Bull. 5 (No.1): 1, 1973.

Squire, R.A. and Bush, M.: The Therapy of Canine and Feline Lymphosarcoma. Dutcher, R.M. and Chiecho-Bianchi, W. (eds.): Unifying Concepts of Leukemia, Bibliotheca Haematologica. Basel, S. Karger, 1973, pp. 189-197.

Squire, R.A., and Bush, M., Melby, E.C. Jr., Neely, L., and Yarbrough, B.: A Clinical and Pathologic Study of Canine Lymphoma: Clinical Staging, Cell Classification and Therapy. J. Natl. Canc. Inst. 51: 565-574, 1973.

Squire, R.A.: Lymphosarcoma and Related Diseases in Animals. In: Molander, D.W. (ed.):Lymphoproliferative Diseases, Springfield, Cc Thomas Co., 1975, pp. 474-513.

Kimbrough, R.D., Squire, R.A., Linder, R.E., Strandberg, J.D., Montali, R.J., and Burse, V.W.: Induction of Liver Tumors in Sherman Strain Female Rats by Polychlorinated Biphenyl Aroclor 1260. J. Natl. Canc. Inst. 55: 1453-1459, 1975.

2021522365

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Squire, R.A. and Levitt, M.H.: Report of Workshop on Classification of Specific Hepatocellular Lesions in Rats. Cancer Res. 35: 3214-3223, 1975.

Squire, R.A.: Bioassay Pathology Procedures. In: Sontag, J.M., Page, N.P., Saffioti, U.: Guidelines for Carcinogenesis Bioassay in Small Rodents, DHEW Publication No. (NIH) 76-801, 1976.

Morton, R.O., Goodman, D.G., Gershwin, M.E., Derkay, C., Squire, R.A. and Steinbert, A.D.: Suppression of Autoimmunity and Lymphoid Proliferation in NZB Mice With Steroid-sensitive X-radio-sensitive Syngeneic Young Thymocytes. Arthritis and Rheumatism, 19: 1347-1350, 1976.

Levitt, M., Harris, C., Squire, R.A., Springer, S., Wenk, M.: Induction of Pancreatic Neoplasms in Syrian golden Hamsters by 2.2-dihydroxy-di-N-propylnitrosamine. Proc. Am. Assoc. Canc. Res., 17: 41, 1976.

Ulland, B.M., Page, N.P., Squire, R.A., Weisburger, E.K., Gart, J.J., and Cypher, R.L.: A Carcinogenecity Assay of Mirex in Charles River CD Rats. J. Nat. Canc. Inst., 581: 133-140, 1977.

Sporn, M., Squire, R.A., Brown, C.C., Smith, J.M., Wenk,M., and Springer, S. 13-Cis-retinoid acid: Inhibition of Bladder Carcinogenesis in The Rat. Science, 195: 487-489, 1977.

Squire, R.A., Sporn, M.B., Brown, C.C., Smith, J.M., Went, M.L. and Springer, S.: Histopathologic Evaluation of The Inhibition of Rat Bladder Carcinogenesis by 13-Cis-Retinoic Acid. Cancer Res. 37: 2930-2936, 1977.

Levitt, M., Harris, C., Squire, R.A., Springer, S., Wenk, M., Mollelo, C., Thomas, D., Kingsberry, E. and Newkirk, C.: Experimental Pancreatic Carcinogenesis. I. Morphogenesis of Pancreatic Adenocarcinoma in the Syrian Golden Hamster Induced by N-Nitrosobis (2-hydroxypropyl) Amine. Amer. J. Path., 88: 15-28,1977.

Grubbs, C.J., Moon, R.C., Squire, R.A., Farrow, G.M., et al. 13-Cis-Retinoic Acid: Inhibition of Bladder Carcinogenesis Induced in Rats by N-Butyl-N-(r-hydroxybutyl) Nitrosamine. Science, 198: 743-744, 1977.

2021522366

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Popper, H., Selikoff, I.J., Maltoni, C., Squire, R.A., and Thomas, L.B.: Comparison of Neoplastic Hepatic Lesions in Man and Experimental Animals. In: Origins of Human Cancer; Hiat, H.H., Watson, J.D., and Winsten, J.A. (Eds.). Cold Spring Harbor Laboratory, NY, pp. 1359-1382.

Levitt, M., Harris, C., Squire, R.A., Wenk, M., Mollelo, C. and Springer, S.: Experimental Pancreatic Carcinogenesis. II. Lifetime Carcinogenesis Studies in The Outbred Syrian Golden Hamster with N.-nitrosobis (2-hydroxpropyl)-amine. J. Nat. Canc. Inst., 50: 701-703, 1978.

Squire, R.A., Goodman, D.G., Dawe, D.J., Fredrickson, T., Harshbarger, J.C., Levitt, M.H., Lingeman, C.H., Strandberg, J.D., and Valerio, M.D.: Tumors In: Garner, T.C., Benirschke, K., Jones, T.C., (eds.), Pathology of Laboratory Animals. New York, Springer-Verlag, 1978, pp. 1051-1283.

Goodman, D.G., Ward, J.M., Squire, R.A., Chu, K.C. and Linhart, M.S.: Neoplastic and Non-neoplastic Lesions in Aging F344 Rats. Toxic. and Appl. Pharm. 48: 237-248, 1979.

Ward, J.M., Goodman, D.G., Griesemer, R.A., Hardisty, J.F., Schueler, R.L., Squire, R.A., Strandberg, J.D.: Quality Assurance for Pathology in Rodent and Carcinogenesis Tests. J. Environ. Path. and Toxicol., Vol. 2, 371-378, 1978.

Stinson, S.F., Squire, R.A. and Sporn, M.D.: Pathology of Esophageal Neoplasms and Associated Proliferative Lesions Induced in Rats by N-Methyl-N-Benzylnitrososamine. J. Nat. Canc. Inst., Vol. 61, No. 6, December, 1978.

Becci, P.J., Thompson, H.J., Grubbs, C.J., Squire, R.A., Brown, C.C., Sporn, M.B., and Moon, R.C.: Inhibitory Effect of 13-Cis-Retinoic Acid on Urinary Bladder Carcinogenesis Induced in C57Bl/6 Mice by N-Butyl-N-(4-Hydroxbutyl) Nitrosamine. Cancer Res., 38: 4463-4466, 1978.

Ward, J.M., Goodman, D.G., Squire, R.A., Chu, K.C., and Linhart, M.S.: Neoplastic and Non-neoplastic Lesions in Aging B6C3F1 Mice. J. Nat. Inst. 63: 849-853, 1979.

Small, J.D., Aurelian, L., Squire, R.A., Strandberg, J.D., Melby, E.C., Jr., Turner, T.B. and Newman, B.: Rabbit Cardiomyopathy: Associated with a Virus Antigenically Related to Human Coronavirus Strain 229E. Amer. J. Pathology, Vol.95, pp. 709-729, 1979.

2021522367

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Squire, R.A.: Chronic toxicity testing. In: Proposed System for Food Safety Assessment. Food and Cosmet. Toxicol. 16, Suppl. 2: 97-108, 1978.

Squire, R.A.: Toxicity Assessment: Decision on the Need for Chronic Toxicity Testing. In: Proposed System for Food Safety Assessment. Food and Cosmet. Toxicol. 16, Buppl. 2:93-96, 1978.

Goodman, D.G., Ward, J.M., Squire, R.A., Paxton, M.B., Reichardt, W.D., Chu, K.C. and Linhart, M.S.: Neoplastic and Non-neoplastic Lesions in Aging Osborne-Mendel Rats. Toxicol. and App. Pharm. 55: 433-477, 1980.

Sheffield, W.D., Squire, R.A., and Strandberg, J.D.: Cerebral Venous Thrombosis in Rhesus Monkey. Vet. Path., 18: 326-334, 1981.

Squire, R.A.: Human Risk Assessment from animal data, In: The Pesticide Chemist and Modern Toxicology, eds. S.K. Bandal, J. Marco, L. Golberg and M.L. Leng. American Chemical Society Symposium Series, No. 160, 1981.

Squire, R.A., Peiper, S.C., Firminger, H.I., Brinkhaus, K.M., Mann, R.B. and Strandberg, J.D.: Histiocytic Sarcoma with a Granuloma-Like Component Occurring in a large Colony of Sprague-Dawley Rats. Amer. J. Path., 105:21-30, 1981.

Squire, R.A.: Ranking animal carcinogens: A proposed regulatory approach. Science, 214:877-880, 1981.

Squire, R.A.: Implications of Mouse Liver Neoplasms for Predicting Carcinogenicity. In: Mouse Hepatic Neoplasia, Current Perspectives, ed. James A. Popp, Hemisphere Publishing, Washington, 1984.

Squire, R.A.: Carcinogenesis Testing and Safety Assessment. Toxicol. and Appl. Pharmac. 4:326-334, 1984.

Squire, R.A., Cameron, L.: An Analysis of Potential Carcinogenic Risk from Formaldehyde. Regulatory Toxicol. and Pharmac. 4: 107-129, 1984.

Squire, R.A.: Carcinogenic Potency and Risk Assessment. Food Additives and Contaminants, 1: 221-231, 1984.

2021522368

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000

Shubik, P., Brown, A., Brown, C., Cabral, J. R. P., Clayson, D., Higgens, I., Levin, W., Magee, P., Mendelsohn, M. L. and Squire, R. A.: Criteria for Evidence of Chemical Carcinogenicity. Science, 225: 682-687, 1984.

Quander, R., Leary, S., Strandberg, J., Yarbrough, B., and Squire, R. A.: The Effect of 2-Hydroxyethylretinamide on The Early and Late Stages of N-Butyl-N (4-Hydroxybutyl) Nitrosamine induced Bladder Carcinogenesis and Tumor Transplantation in Fischer 344 Rats. Cancer Res., 45: 5235-5239, 1985.

Squire, R.A.: Histopathological Evaluation of Rat Urinary Bladders from the IRDC Two-Generation Carcinogenicity Bioassay of Saccharin. Food and Chemical Toxicology. Vol. 23, 491-497, 1985.

Squire, R.A.: Classification and Differential Diagnosis of Urinary Bladder Neoplasms in the Rat, In: Monographs on Pathology of Laboratory Animals, Urinary System, eds. Jones, T.C., Mohr, U., Hunt, R.D. Springer-Verlag, Berlin, 1986.

Burnett, C.M. and Squire, R.A.: The Effect of Dietary Administration of Disperse Blue No. 1 on the Urinary System of the Fisher 344 Rat. Fd. Chem. Toxicol., 24: 269-276, 1986.

Anderson-Berg, W., Squire, R.A. and Strand, M.: Specific Radioimmunotherapy using Yttrium-90-Labelled Monoclonal Antibody in Erythroleukemic Mice. Cancer Res. 47:1905-1912, 1987.

Squire, R.A.: The Complexities of Interpreting Carcinogenicity Data, In: Pesticide Science and Biotechnology, eds. Greenhalgh, R. and Roberts, T.R. Blackwell Scientific Publications, Oxford, 1987.

Squire, R.A.: Biological and Pathological Data to be Considered in The Interpretation of Equivocal or Marginal Animal Carcinogenicity Tests. Fund. Appl. Toxicology, 1988 (In Press).

2021522369

Source: https://www.industrydocuments.ucsf.edu/docs/shhm0000